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De Rerum

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DE RERUM NATURA

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T. LUCRETI CARI

DE RERUM NATURA

LIBER QUINTUS

EDITED

WITH INTRODUCTION AND NOTES

BY

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FELLOW OF TRINITY COLLEGE, CAMBRIDGE.

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PREFACE.

THE fifth book of Lucretius contains some of his finest work and also, being less technical and dry than any of the other books, is best suited to serve as an introduction to the study of the *De Rerum Natura*. This edition has been prepared with that object in view : it aims both at explaining this one book in detail for beginners and at smoothing the way to the comprehension of other and more difficult parts of the poem.

My obligations are very great, in all parts of my book, to Munro's famous edition. In the Introduction, I have also made considerable use of Professor Sellar's sympathetic and felicitous criticism in his two volumes on the Roman poets ; and much of my fourth section is abridged from Zeller. For the astronomical section I have to thank the dexterity and kindness of Mr H. L. Callendar, Fellow of Trinity College. It may be worth saying here that the astronomical theories of Lucretius are simple enough, so long as they are purely fanciful, and difficult only when they approximate to the truth. Consequently the information here given is only a simplification of what may be found in the ordinary astronomical text-books.

The text is in the main that of Munro's last edition ; but I have admitted a few conjectures of Madvig and more recent writers. All such deviations from Munro's text are indicated.

In writing the notes I have constantly consulted Munro's commentary, and I have also kept before me the editions of Professor Kelsey (Boston 1884) and of MM. Benoist and Lantoine (Paris 1884), both of which are based on Munro but contain some original matter. But, owing to the class of students whom I had in view, it was impossible for me to follow any of these closely ; and the notes are for the most part of my own writing. Finally I have to thank Dr J. P. Postgate, Fellow of Trinity College, who most kindly offered to read over the notes and made many suggestive criticisms.

J. D. DUFF.

TRINITY COLLEGE, CAMBRIDGE,
December, 1888.

INTRODUCTION.

I. LIFE OF LUCRETIUS.

Nec vixit male qui natus moriensque fefellit.

Horace Ep. i 17 10.

THE chronicle of Hieronymus or St Jerome, compiled about 400 A.D., has a record to the following effect: 'the poet Titus Lucretius Carus was born in 94 B.C.; he lost his reason in consequence of drinking a love-philtre and died by his own hand in his forty-fourth year, after composing in his lucid intervals several books which Cicero afterwards corrected.' The date of his death would thus be 50 B.C. But Donatus, who is more generally followed, in his life of Virgil mentions as a remarkable coincidence that Lucretius died (nothing is said of madness or suicide) on October 15th, 55 B.C., the day on which Virgil, being just fifteen, assumed the *toga virilis*.

We may then assume with fair probability that Lucretius was born in 99 B.C., and died in the autumn of 55. The other statements made by St Jerome are even more doubtful than his chronology. For first, with regard to the alleged madness and suicide, it is very strange that such a tragical ending of a great genius is nowhere mentioned by any subsequent Latin writer. And on the other hand the story was just such a pious fiction as was likely to be invented by a posterity shocked by the heterodoxy of Lucretius. It is worth noticing that a similar end was invented for Lucian, another Epicurean heretic: he is said by Suidas to have been torn to pieces by dogs. Again it seems highly improbable that the poem was written in the lucid intervals of a madman: the argument is severely logical, the arrangement masterly, in those parts of the poem which are not

obviously unfinished. The last statement of the chronicle, that Cicero corrected the books, implies one fact which is certainly true, that Lucretius left his poem unfinished and that it was given to the world after his death by some other hand. But we do not know what kind or amount of 'correction' the editor supplied, or even which Cicero was the editor, Marcus Tullius or his brother Quintus. Lucretius is mentioned once by the orator in a letter¹ written from Rome to his brother Quintus, in January, 54 B.C., four months after the poet's death; but unfortunately the text of the passage is corrupt and throws no light on either of these questions; it is impossible even to gather how far the writer admired the poem, and on what grounds.

These scanty and unsatisfactory details are all we are told by the writers of antiquity about the personal history of Lucretius. He is mentioned occasionally by both poets and prose-writers, sometimes quoted and sometimes criticised; but no particulars of his life or death are anywhere else recorded. It is possible to add a very little to this meagre account from the internal evidence of his poem, though some of his editors have pushed conjecture far beyond reasonable limits.

In the first place it is tolerably certain that he was a Roman of good family and fortune. His *gentile* name is that of a very old patrician house; and the terms of absolute equality in which he addresses Memmius, a very distinguished figure at Rome in those days, point to the same conclusion. A modern writer has called Lucretius 'the aristocrat with a mission'²; and it is true that the whole tone of his poem is that of a man in easy circumstances and familiar with the luxury of which he disapproves.

It is still more certain that his life was that of a recluse. Political activity was always distasteful to the Epicureans; and at Rome just at this time civil war was impending, and the political out-look was very dark. Lucretius is never more inspired than when he is denouncing ambition. Nor again could the immense literary activity of the time bring him into

¹ ad Q. fr. ii 11.

² F. W. H. Myers, *Classical Essays*, p. 126.

contact with other men, as the literature he loved belonged entirely to the past. He was before all things a student. Much of his time must have been spent in study of the Greek philosophers and poets: he tells us himself that the absorbing pursuit of his life, which he carried on through 'the clear nights' and which haunted him even in sleep¹, was the study of the philosophers and the exposition in his poem of their 'glorious discoveries.' According to tradition, his master Epicurus himself left three hundred rolls, 'golden words,' says Lucretius, 'on which I feed like a bee among the flowers².' And besides Epicurus there are many other abstruse and voluminous writers whose authority he acknowledges or whose dogmas he refutes; Empedocles and Democritus are conspicuous among the first, Heraclitus and Anaxagoras among the second. He also translates from or imitates the following Greek authors: Homer, Hesiod, Euripides, Thucydides, Hippocrates, and perhaps Aristophanes and Plato. Among Latin writers, we can trace imitation of Ennius and his nephew Pacuvius, the chief epic poet and the chief tragedian of early Latin literature.

Finally, from the truth and evident pleasure with which he describes all manner of natural objects and illustrates his arguments by them, we may infer that his life was spent for the most part in the country. We may think of Lucretius in some quiet place, away from 'the smoke and wealth and noise of Rome'; we may fancy him watching the clouds on the hills or the waves on the shore with the delight of a poet and the keen interest of a philosopher, or poring over the scrolls of Epicurus, and studying how he might best transfer their precious contents to his own immortal poem.

II. POEM OF LUCRETIIUS.

Docti furor arduus Lucreti.

Statius Silv. ii 7 76.

The *De Rerum Natura* is a didactic poem: it professes to expound systematically a particular subject. The Works and

¹ i 142; iv 969.

² iii 9—13.

Days of Hesiod, the Georgics of Virgil, the Essay on Man of Pope, all belong to this class of poetry. The subject which the poem of Lucretius is intended to explain is the philosophical system of Epicurus or part of it. A short account is given below of such Epicurean doctrines as are explained or alluded to in the fifth book of Lucretius.

The form and title of the poem are derived from Empedocles of Agrigentum, who lived in the fifth century B.C. and wrote a famous treatise in hexameter verse, 'περὶ φύσεως,' of which some fragments are extant. The poem is dedicated to Gaius Memmius, prominent as an orator and statesman of the senatorial party, but a worthless and unprincipled man; why Lucretius thought him worthy of this distinction, we cannot tell. No other contemporary is mentioned in the poem, though some editors have thought they could trace allusions to Clodius and to Caesar.

The first two books are devoted to a very full account of atoms and void, these being, according to Democritus and Epicurus, the two great factors of the universe; here too the rival systems of other philosophers are stated and refuted. There is less evidence of incompleteness in these books than in the others. The third book is mainly taken up in proving that the soul is a material part of man, made up of atoms as the body is, and dying with the body. This theory is of the highest importance in the eyes of Lucretius and is therefore proved at great length. The fourth book explains the Epicurean theory of sight and the other senses; the fifth gives an account of the origin of the world, of life, and of human society; of this book a fuller analysis is given below. The last book is miscellaneous in its contents. It begins by discussing the nature of thunder and lightning and other celestial phenomena; it then deals with various natural curiosities, such as magnetic attraction, and ends with a description, taken from Thucydides, of the plague of Athens. It is obviously more confused and less complete than any of the other books.

Thus it will be seen that Lucretius begins by laying down the first principles of the atomic philosophy, and then discusses

in his last four books some special applications of that doctrine, which formed part of the system of Epicurus. The aim of the poet throughout is not so much purely scientific as practical and moral. His main object, as he tells us again and again, is to free men's minds from the yoke of superstitious fears by displaying to them the aspect and the laws of nature; and this is why he argues with such passionate earnestness against the immortality of the soul and the interference of the gods in human affairs. Thus the purpose of the fifth book is to show that the world and all that it contains were not created by divine power, and that all progress is the result of natural experience, not of divine guidance. And on the whole it appears that Lucretius lived long enough to complete in outline the whole task he had set before himself, though the latter part of the poem is far from complete in artistic finish and arrangement of materials.

With regard to the diction and metre of the poem, Lucretius deliberately adopted a style which must have seemed archaic to his contemporaries. This may be seen by comparing the *De Rerum Natura* with the *Peleus and Thetis* of Catullus, which was certainly written at nearly the same time. Just as Greek epic verse continued to the end to imitate the forms and vocabulary of Homer, so Lucretius thought fit to take for his model the *Annales* of Ennius, the only great epic which the language possessed, though two centuries had passed since it was written. At the beginning of his own poem he makes honourable mention of Ennius¹, and constantly imitates even the few hundred lines of fragments which we possess. It is probable too that his archaism was intended as a protest against the tendency of contemporary Latin literature. For just at this time there was great literary activity among the Romans. Any educated man could, as Mommsen says, turn off his five hundred hexameters at a sitting; Quintus Cicero wrote four tragedies in a fortnight to beguile the dulness of winter-quarters in Gaul. But all these poems were worthless imitations of bad models,—of Callimachus and the other learned poets of Alex-

¹ i 117.

andria. The pure taste of Lucretius revolted from the predominant fashion and attached itself to Ennius, and, through Ennius, to the classical Greek literature. Thus his philosophical creed and his literary taste alike led him to discard all such antiquarian and mythological lore as we see in the *Coma Berenices* of Catullus, translated from Callimachus. The mythology he resolutely refused to believe, and the only learning he valued was that which had power to purify the hearts of men and make their lives happy.

His archaism is seen both in the language and in the style. He uses many old words and forms, from which Virgil selects with discrimination; and he also coins many new words which no writer used after him. He prefers to use a significant Greek word in place of a feeble or obscure Latin equivalent. He is fond of the artifices of alliteration and assonance, which seem so congenial to early Latin and occur so constantly in Ennius and still more in Plautus; here again Virgil decidedly restricts the practice of his predecessors. His sentences are often excessively long and loosely constructed; he is indifferent to ambiguities which his Augustan successors would not have tolerated; and his order of words is often perplexing to those who are not familiar with his style. Again his metre, though more refined than that of Ennius, itself is wanting in harmony and especially in variety, when compared with the perfect rhythm of Virgil.

The difficulty of Lucretius, which even the ancients felt¹, is partly due to his fondness for archaism, but also to the inadequacy of the language as an instrument for expressing abstruse thought. Ennius had been able with rude vigour to depict the early history of Rome, to lay down a model of heroic verse for his successors, and to bequeath them a considerable vocabulary. But the language was still, as Lucretius thrice over complains², a very imperfect vehicle for the discussion of political, moral, and metaphysical ideas. The great measure of success which he attains must have been the result of immense labour.

¹ Quintil. Inst. x 1 87.

² i 136, i 830, iii 258.

Many have thought that Lucretius was singularly unfortunate in his choice of a subject. A great poet has said that poetry should be simple, sensuous, impassioned; and it would be difficult for any poem, consisting mainly of the exposition of a philosophical system, to satisfy these conditions. This is especially true of the Epicurean philosophy, which, at least on its metaphysical side, is of all systems the least lofty and the least profound.

Yet, in spite of his unattractive subject, his archaism, and his monotonous verse, the poem of Lucretius is immortal. The greatness is in the man rather than in the theme. In the doctrine of atoms there is much that is wonderful and striking to the imagination; but after all it is the personality and poetic power of Lucretius that make his work a possession for ever—his noble enthusiasm, his profound pathos, his intellectual seriousness, and his descriptive genius. In our own age his poem excites peculiar interest, because of its scientific spirit, and because it discusses the very same problems of religion, science, and anthropology which we are engaged in discussing over again. To his great qualities there is no lack of testimony. Few have known ancient and modern literature as Macaulay did; and he says of Lucretius: ‘In energy, perspicuity, variety of illustration, knowledge of life and manners, talent for description, sense of the beauty of the external world, and elevation and dignity of moral feeling, Lucretius had hardly ever an equal¹.’ Munro too, as competent a judge as any man who ever lived, sums up his opinion thus: ‘It would hardly perhaps do violence to the taste of the present age to call Lucretius the greatest of extant Latin poets. Like the rest of his countrymen, he is not a great creative genius; we find in him many echoes even of the scanty fragments which we yet possess of the old tragic and epic poets, Accius, Pacuvius, and, above all, Ennius. He owes still more to the Greeks, especially Empedocles, so far as regards the form of his poem....From the splendid eulogies which in his first book he passes on Ennius and Empedocles, we may feel sure that he did not wish to conceal his obligations,

¹ Life, vol. 1 p. 468.

but, like other Latin poets, thought he had a right to make what use he pleased of his Greek and Roman predecessors. And he has merits of his own unsurpassed in the whole compass of Latin poetry. It has often struck me that his genius is akin to that of Milton. He displays a wonderful depth and fervour of thought, expressed in language of singular force and beauty; an admirable faculty of clear and vigorous and well-sustained philosophical reasoning; and a style equal in its purity and correctness to that of Terence, Caesar or Cicero, and superior to that of any writer of the Augustan age¹.

III. LUCRETIUS AND VIRGIL.

*Non verba autem sola sed versus prope totos et locos quoque
Lucreti plurimos sectatum esse Vergilium videmus.*

Aulus Gellius i 21 7.

When the poem of Lucretius was published, Virgil was fifteen years of age. 'At such an age therefore the style and manner of Lucretius were able to impress themselves fully on the younger poet's susceptible mind; and perhaps the highest eulogy which has ever been passed on the former is that constant imitation of his language and thought which pervades Virgil's works from one end to the other².' It may be added that this influence was at its height at the time when the *Georgics*, and especially the second, were written.

Virgil never mentions Lucretius directly; but this is not surprising when we remember that he does not mention Theocritus once in the *Eclogues*, nor Hesiod by name in the *Georgics*, nor Homer at all in the *Aeneid*. There is however one passage which is unmistakably intended to carry an allusion to Lucretius. The lines are as follows:

Felix, qui potuit rerum cognoscere causas,
Atque metus omnes et inexorabile fatum
Subiecit pedibus strepitumque Acherontis avari.

¹ Journal of Sacred and Classical Philology i p. 21.

² Munro, ii p. 19.

Fortunatus et ille, deos qui novit agrestes,
Panaque Silvanumque senem Nymphasque sorores¹.

It is evident that in these and the preceding lines Virgil is instituting a comparison, to his own disadvantage, between Lucretius, who had ventured to explain the laws of nature, and himself, who was content with loving and describing her external aspects. We may compare the similar contrast drawn by Matthew Arnold between Goethe and Wordsworth, in which Virgil's words are thus applied to Goethe :

And he was happy, if to know
Causes of things, and far below
His feet to see the lurid flow
Of terror, and insane distress,
And headlong fate, be happiness.

Virgil was a most modest man and no doubt sincerely believed that Lucretius was a greater genius than himself. But if he did so, he stood almost alone among his countrymen. The *Arma virumque*, as the Roman poets love to call the Aeneid², entirely eclipsed the *Aeneadum genetrix* with the Roman public, if indeed the latter ever had any vogue at all ; and even the few, who ventured to disparage Virgil³, do not seem to have set up Lucretius as a rival object of admiration. It was reserved for our own century to extol the earlier poet at the expense of the later. Johnson maintained with accustomed vigour against Burke the superiority of Homer to Virgil ; but if any rash member of the Club had substituted Lucretius for Homer, it is probable that Johnson and Burke would have made common cause against so novel a paradox. During the present century, however, the comparison has often been made ; and the verdict of the learned has gone, on the whole, in favour of Lucretius. This is not the place to enter on a discussion of such wide range and doubtful value ; but, if it be admitted that a nation is competent to judge its own literature, it should also be remembered

¹ Georg. ii 490—494.

² Ov. Trist. ii 534, Mart. viii 56 19.

³ Ov. Remed. 367 ; Suet. Gaius 34.

that the Romans were practically unanimous in ranking Virgil as the peer of Homer and far above all other Latin poets¹. It is very improbable that they would have allowed even the *proximi honores* to Lucretius. We are not entitled to settle such a question absolutely, by our own standards and our own preferences; how should we feel ourselves, if a highly educated Hindoo asked us to take his word for it, that Marlowe was a greater poet than Shakespeare, or Wordsworth than Milton?

It is interesting to notice that the relation between the two poets is by no means one of unmixed sympathy. When we consider the religious and almost mystical temperament of Virgil, his respect for tradition, and the difference of his political and social surroundings, we cannot wonder that he is repelled as well as attracted by the genius for which he expresses an almost despairing admiration. 'Virgil is no mere disciple of Lucretius, either as regards his philosophy or his art. Though his imagination pays homage to that of the older poet; though he acknowledges his contemplative elevation; though he has a strong affinity with the deep humanity of his nature; yet in his profoundest convictions and aspirations he proclaims his revolt from him².'

It will be observed that in many of the passages of Virgil where we find an echo of Lucretius, the sense is quite different though the words are like or even identical. This is most easily accounted for, by supposing that his mind was so saturated with the writings of his predecessor, that he reproduced the cadences and even words without being conscious of it. An example may be taken from another pair of Latin poets. Every reader of Martial is struck by the number of allusions to Catullus and imitations of him. But there are also resemblances of a subtler kind. For instance, Catullus in one of his poems reproaches Calvus for sending him a present of some bad poetry, and vows to take revenge by sending him a similar present in return:

¹ Quintil. Inst. xi 85.

² Sellar, Virgil p. 197.

nam, si luxerit, ad librariorum
curram scrinia.....¹

Now Martial, addressing his fourth book, advises it to gain the approval of Apollinaris, and tells it, if condemned, to be off to the trunk-makers' :

si damnaverit, ad salariorum
curras scrinia protinus licebit².

The words are almost exactly those of Catullus ; the meaning is entirely different. There can be no stronger proof of ingrained familiarity than such unconscious imitation.

The following is a list of the passages in the Eclogues and Georgics which are most obviously imitated from the fifth book of Lucretius.

Lucr. v 8	deus ille fuit, deus, inclyte Memmi.
Ecl. v 64	deus, deus ille, Menalca.
Lucr. v 30	equi spirantes naribus ignem.
Georg. ii 140	tauri spirantes naribus ignem.
Lucr. v 33	asper, acerba tuens.
Georg. iii 149	asper, acerba sonans.
Lucr. v 97	nec me animi fallit quam res nova miraque menti accidat... et quam difficile id mihi sit pervincere dictis.
Georg. iii 289	nec sum animi dubius, verbis ea vincere magnum quam sit...
Lucr. v 202	possedere, tenent rupes vastaeque paludes.
Georg. ii 144	implevere, tenent oleae armentaque laeta.
Lucr. v 207	ni vis humana resistat, vitai causa valido consueta bidenti

¹ xiv 17.

² iv 86 9.

- ingemere, et terram pressis proscindere
aratri.
- Georg. i 198
45 ni vis humana quotannis...
depresso incipiat iam tum mihi taurus
aratro
ingemere.
- ii 237 validis terram proscinde iuvenis.
- Lucr. v 253 pulveris exhalat nebulam nubesque volan-
tes.
- Georg. ii 217 tenuem exhalat nebulam fumosque volu-
cres.
- Lucr. v 488 camposque natantes.
- Georg. iii 198 campique natantes.
- Lucr. v 751 solis item quoque defectus lunaeque late-
bras.
- Georg. ii 478 defectus solis varios lunaeque labores.
- Lucr. v 780 novo fetu quid primum in luminis oras
tollere et incertis crerint committere ventis.
- Georg. ii 47 sponte sua quae se tollunt in luminis
oras.
- 332 inque novos soles audent se gramina tuto
credere.
- Lucr. v 786 arboribusque datumst variis exinde per
auras
crescendi magnum inmissis certamen ha-
benis.
- Georg. ii 363 dum se laetus ad auras
palmas agit laxis per purum inmissus
habenis.
- Lucr. v 840 orba pedum partim.
- Georg. iv 310 trunca pedum primo.
- Lucr. v 862 genus acre leonum.
- Georg. iii 264 genus acre luporum.

- Lucr. v 925 at genus humanum multo fuit illud in
agris
durius, ut decuit, tellus quod dura creasset.
Georg. i 62 Deucalion vacuum lapides iactavit in or-
bem,
unde homines nati, durum genus.
- Lucr. v 937 quod sol atque imbres dederant, quod
terra crearat
sponte sua, satis id placabat pectora do-
num.
- Georg. ii 500 quos rami fructus, quos ipsa volentia rura
sponte tulere sua, carpsit.
- Lucr. v 944 miseris mortalibus.
Georg. iii 66 miseris mortalibus.
- Lucr. v 1250 nam fovea atque igni prius est venarier
ortum
quam saepire plagis saltum canibusque
ciere.
- Georg. i 139 tum laqueis captare feras et fallere visco
inventum, et magnos canibus circumdare
saltus.
- Lucr. v 1255 manabat venis ferventibus in loca terrae
concava conveniens argenti rivus et auri.
Georg. ii 165 haec eadem argenti rivos aerisque metalla
ostendit venis atque auro plurima fluxit.
- Lucr. v 1368 fructusque feros mansuescere terram
cernebant indulgendo blandeque colendo.
Georg. ii 36 fructusque feros mollite colendo.
- Lucr. v 1387 per loca pastorum deserta atque otia dia.
Georg. iii 476 desertaque regna
pastorum, et longe saltus lateque vacantes.
- Lucr. v 1393 propter aquae rivum.
Ecl. viii 87 propter aquae rivum.

in size, shape, and weight, and are unlimited in number. They have existed from everlasting and can never be split up or destroyed in any way, because they are solid and indivisible, containing no void. They are in constant motion, being impelled downwards by their own weight and sideways by the blows of other atoms; they are so small that our sight cannot perceive them. Void also is unlimited in extent; and so the universe, which is made up of these two constituents, is also unlimited. A finite world such as ours, including earth, sea, and sky, is formed whenever a concourse of atoms, after many fruitless experiments, have assumed positions which enable them to move for a time without separating from one another. But a world so formed, as it had a beginning, will also have an end; and the liberated atoms will then continue their race through void and take part in future combinations. All these operations are the result of chance, not of design.

It was certainly a happy intuition that induced Epicurus, indifferent as he was to science in general, to adopt this scientific theory. His contemporaries thought it ridiculous, but modern science has accepted it as true in the main. 'The propositions in which Lucretius has stated his atomic theory anticipate some recent discoveries in both chemistry and physics in a most marvellous way. Science has now proved that his propositions as to the constitution of matter are either certainly true, or else foreshadow the truth¹.'

(2) THE SOUL. The psychology of Epicurus is strictly materialistic, and admits no difference between mind and matter. Just as the body is made up of atoms, so is the soul or vital principle ($\psi\upsilon\chi\eta$, *anima*), and the mind or rational principle ($\lambda\acute{o}\gamma\omicron\varsigma$, *animus*). The only difference is that the soul and mind consist of the smallest and lightest atoms; this is proved by the speed of thought and by the fact that the body, when life has ceased, is not diminished in size and weight. The vital principle is diffused over the whole body; the rational principle has its seat in the breast. The soul, under which both *anima* and *animus* may be included, cannot exist apart

¹ Masson, Atomic Theory of Lucretius, p. I.

from the body; it was born together with it and will die with it. Death therefore is nothing to us, as sensation cannot survive for a moment the separation of body and soul.

Lucretius brings forward no less than twenty-seven arguments against the immortality of the soul. He is anxious to leave no doubt on the point, as he believes that the unhappiness of men is mainly due to their fear of punishment in a future life.

(3) PERCEPTIONS AND CONCEPTIONS. All knowledge, according to Epicurus, depends on the senses. Their evidence is unimpeachable: when we get a wrong impression of some object we see, the blame rests, not with our sensation, but with our judgment of the sensation, i.e. with the mind, not with the eyes. By a repetition of the same perception there arises a conception or notion (*πρόληψις*), which is called by Lucretius *notities*, and more accurately by Cicero *anticipatio*. This notion is a general picture, retained in the mind, of what has been perceived. The origin of perceptions is explained in the following way. Exceedingly fine films (*εἰδῶλα*, *simulacra*) are constantly being discharged from the surface of all bodies, bearing the exact likeness of the body itself. These films move with infinite speed through void and are conveyed to the soul by the various organs of sense. When we see a horse, an image has come from the horse and passed through our eyes into the soul. Taste, hearing, and smell are explained in just the same way; only the atoms of smells travel slower than the atoms of sounds, and the atoms of sounds slower than the atoms of visible things. Thought also is excited entirely by material images; if we think of a Centaur, our thought is due to an image of a horse which has got mixed up with the image of a man. Lucretius goes so far as to say that when we dream of dead friends, our dream is due to a material image of them; but it seems impossible to explain how anything that no longer exists can discharge an image. Finally to images is ascribed the origin of belief in the gods; but here too there is some inconsistency¹.

¹ See note to l. 1170.

(4) THE GODS. Epicurus taught that the gods are immortal and perfectly happy. But this happiness would be perturbed if they sympathised with the sorrows of men. Therefore he held that they were absolutely regardless of human affairs and indifferent to our merits or demerits. Their body consists of atoms so fine as to be invisible to our senses; they live in spaces between worlds (*μετακόσμια*, *intermundia*), where no storms ever come. It is certain from the evil in the world that the gods had no hand in making it.

This theory is beset with difficulties, which might perhaps have been removed if Lucretius had fulfilled his intention of explaining it at large¹. But in fact the gods are quite out of place in the system of Epicurus. Their place is occupied by Nature, which is conceived, at all events by Lucretius, as an omnipotent and omnipresent force, governing the universe by fixed laws. If the Epicurean gods are included in the universe and are formed of atoms, as we are told, how can they escape the general law that all combinations of atoms had a beginning and must have an end? To give a satisfactory answer, Epicurus must have sacrificed the unity of his system.

(5) THE HEAVENLY BODIES. His theory of knowledge led Epicurus to strange conclusions in his astronomy. Everything, he said, which can be tested by the senses and is confirmed by them, is true; again, opinions which cannot be brought to this test and at the same time are not contradicted by it, are all equally true. Thus it is a certain truth that the sun is really about the same size as it appears to us to be, because a fire on earth, so long as it is visible, does not diminish in size². But to say that the stars and the sun must move from some one controlling cause, or that eclipses admit of only one explanation, is a vain unphilosophical assumption. For these things are beyond our powers of observation, and there are many ways of explaining them, none of which is contradicted by the evidence of the senses, and each of which must be true, if not for our world, for some one of the countless worlds contained in the universe.

¹ v 155.

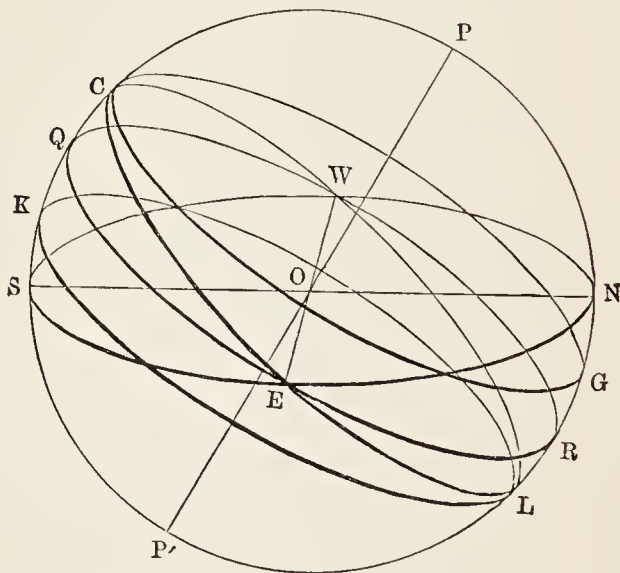
² See n. before l. 564.

It will be noticed that Lucretius often gives the right explanation together with a variety of wrong ones, in dealing with these matters. The astronomers of his time did not understand the nature of attraction; and as they believed that the sun revolved round the earth, they therefore took his apparent motions to be real; but they had some idea of the size of the heavenly bodies, and they explained correctly the motion of the moon round the earth and the cause of eclipses.

V. THE CELESTIAL SPHERE.

Nec, si rationem siderum ignores, poetas intellegas.

Quintilian Inst. Or. i. 4.



The common celestial globe is a device for mapping the apparent place of the stars in the sky, just as places on the earth are shown on the terrestrial globe; with this difference, that to see the constellations as they actually appear, the observer must

imagine himself at the centre O of the sphere. In the accompanying figure, which represents the celestial sphere as seen in latitude 60° N., the places of the stars are not shown, but only some imaginary circles to which their positions are referred.

The observer's *Horizon* is represented by the circle NESW. The half, NLP'S, below the horizon, is of course invisible to the observer.

The *Axis*, POP', is the direction of the earth's axis of rotation, round which, in consequence of the earth's rotation, the starry sphere appears to turn. The ancients believed that the earth was really at rest in the centre of the universe and that the stars were fixed to an invisible frame-work which revolved round the earth.

The *Poles* P, P', are the points in which the axis meets the sphere; they are called the North and South Poles respectively.

The *Equator* EQWR is an imaginary circle midway between the poles. It meets the horizon in the East and West points, E and W.

The sun has two apparent motions, which are both really due to motions of the earth. The rotation of the earth on its axis makes him appear to rise and set every day; while the revolution of the earth in its orbit round the sun makes him appear to travel round the sky once a year.

The *Ecliptic*, ECWL, is the apparent annual path of the sun among the stars. The celestial sphere appears to turn from East to West; but the sun, in his *annual* path, appears to travel in the contrary direction.

The *Zodiac*, so named from the animals ($\zeta\phi\delta\iota\alpha$) by which the constellations are represented, is a narrow belt of sky on either side of the ecliptic. It is divided into twelve equal portions called the *Signs of the Zodiac*, which are named after the constellations they contain.

The *Nodes* or *Equinoxes* are the points in which the ecliptic cuts the equator. The sun in his course along the ecliptic from West to East crosses the equator from South to North at the time of the vernal equinox (March 21st) in the sign of the Ram (see l. 687). His daily course in the sky then coincides exactly

with the equator EQWR, exactly half of which is above the horizon, so that the lengths of day and night are equal. In the figure the node or point of intersection is for convenience represented as just setting at W; the ecliptic is shown in the position which it would occupy at 6 p.m. on March 21st. The sun crosses the equator again from North to South at the time of the autumnal equinox, in the sign of the Scales; rising at E at 6 a.m. on Sept. 23rd.

The *Solstices* are the points C and L of the sun's annual path at which he is furthest from the equator. The sun is at C and due south at noon on June 22nd. On that day his daily course is the circle CG, the greater half of which is above the horizon, so that the day is longer than the night. The sun is at L at midnight on Dec. 21st; the greater half of his daily course LK, is then below the horizon (see ll. 682—686).

These points are called *Solstices* because the sun, after moving away from the equator, appears to stop and turn back. They are also called *Tropics*, i.e. turning points. The summer solstice C is in the sign of Cancer (the Crab), the winter solstice L in that of Capricorn (the Goat); see ll. 615—617.

Eclipses. The moon completes the circuit of the Zodiac once a month. Her orbit is slightly inclined to the ecliptic; if it coincided with the ecliptic, it is evident that the moon would pass between the earth and the sun every month, causing an eclipse. As it is, eclipses can only occur when the moon happens to be near one of the *nodes* of her orbit, i.e. those points where her orbit intersects the ecliptic. An eclipse of the sun can only occur at new moon, when the moon is between the sun and the earth; an eclipse of the moon, at full moon, when the moon is on the side of the earth opposite to the sun, and passes through the cone of the earth's shadow (see l. 764).

ANALYSIS.

The fifth book of Lucretius is a kind of philosophical epic with man for a hero, and describes the origin of the world, of life, and of human society. This description is not irrelevant to the main purpose of the work ; on the contrary, the exposition would be incomplete, if it were not shown that the world and its inhabitants came into being and continue to exist from purely natural causes. The book falls into two main divisions of nearly equal length, the first of which relates the creation of the world, the second the history of man.

After a panegyric on Epicurus (1—54), the subjects to be treated of are enumerated. These are :

- i. The mortal nature of the world.
- ii. The formation of the world.
- iii. The kinds of animals which sprang from the earth.
- iv. The origin of speech.
- v. The origin of religion.
- vi. The movements of the heavenly bodies.

The first subject is then begun, 91—109 ; but here a long digression is inserted in which it is proved that the world is not divine, and that the gods had nothing to do with the making of it. The argument is resumed at 235 and ended at 415. The formation of the world is next described, 416—563 ; but here too there is a digression, 509—533, about the motion of the stars. The rest of the first half of the book, 564—770, is taken up by a very full discussion of the sun and moon, their size, motions, and eclipses.

The second half begins with an account of the growth of vegetation first and then of animals and men, 770—836. It is next pointed out that in the struggle for existence many kinds of animals became extinct ; but no such animals as a Centaur or Scylla can at any time have existed, 837—924.

The rest of the book describes the development of man in civilisation, and may be divided as follows :

1.	The condition of primitive man.	925—1010
2.	The beginnings of civilisation.	1011—1027
3.	The origin of speech.	1028—1090
4.	The discovery of fire.	1091—1104
5.	The beginnings of political life.	1105—1160
6.	The origin of religion.	1161—1240
7.	The discovery of the metals.	1241—1280
8.	The methods of early warfare.	1281—1349
9.	The invention of weaving.	1350—1360
10.	The beginnings of agriculture.	1361—1378
11.	The invention of music.	1379—1435
12.	Complete civilisation.	1436—1457

Thus Lucretius discusses all the subjects he had promised to discuss, and others as well; but not in their original order. So the account of the sun and moon, instead of coming last, is given immediately after the account of the world's formation. It is also clear that certain paragraphs did not form part of the original sketch but were added subsequently. Thus at 1091 the first discovery of fire is related, but, at 1011, it was already in general use. These inconsistent paragraphs are indicated in the notes, as they occur.

T. LUCRETI CARI
DE RERUM NATURA
LIBER QUINTUS.

QUIS potis est dignum pollenti pectore carmen
Condere pro rerum maiestate hisque repertis?
Quisve valet verbis tantum qui fingere laudes
Pro meritis eius possit qui talia nobis
Pectore parta suo quaesitaque praemia liquit? 5
Nemo, ut opinor, erit mortali corpore cretus.
Nam si, ut ipsa petit maiestas cognita rerum,
Dicendum est, deus ille fuit, deus, inclyte Memmi,
Qui princeps vitae rationem invenit eam quae
Nunc appellatur sapientia, quique per artem 10
Fluctibus e tantis vitam tantisque tenebris
In tam tranquillo et tam clara luce locavit.
Confer enim divina aliorum antiqua reperta;
Namque Ceres fertur fruges Liberque liquoris
Vitigeni laticem mortalibus instituisse; 15
Cum tamen his posset sine rebus vita manere,
Ut fama est aliquas etiam nunc vivere gentes.
At bene non poterat sine puro pectore vivi;
Quo magis hic merito nobis deus esse videtur,
Ex quo nunc etiam per magnas didita gentes 20

Dulcia permulcent animos solacia vitae.
 Herculis antistare autem si facta putabis,
 Longius a vera multo ratione ferere.
 Quid Nemeaeus enim nobis nunc magnus hiatus
 Ille leonis obsesset et horrens Arcadius sus? 25
 Denique quid Cretae taurus Lernaeeque pestis
 Hydra venenatis posset vallata colubris?
 Quidve tripectora tergemini vis Geryonai,
Quid volucres pennis aeratis invia stagna
 Tanto opere officerent nobis Stymphala colentes,
 Et Diomedis equi spirantes naribus ignem 30
 Thracis Bistoniasque plagas atque Ismara propter?
 Aureaque Hesperidum servans fulgentia mala,
 Asper, acerba tuens, immani corpore serpens
 Arboris amplexus stirpem quid denique obsesset
 Propter Atlanteum litus pelageque sonora, 35
 Quo neque noster adit quisquam nec barbarus audet?
 Cetera de genere hoc quae sunt portenta perempta,
 Si non victa forent, quid tandem viva nocerent?
 Nil, ut opinor: ita ad satiatem terra ferarum
 Nunc etiam scatit et trepido terrore repleta est 40
 Per nemora ac montes magnos silvasque profundas;
 Quae loca vitandi plerumque est nostra potestas.
 At nisi purgatumst pectus, quae proelia nobis
 Atque pericula tumst ingratis insinuandum!
 Quantae tum scindunt hominem cuppedinis acres 45
 Sollicitum curae quantique perinde timores!
 Quidve superbia spurcicia ac petulantia? quantas
 Efficiunt clades! quid luxus desidiaequae?
 Haec igitur qui cuncta subegerit ex animoque
 Expulerit dictis, non armis, nonne decebit 50
 Hunc hominem numero divom dignarier esse?
 Cum bene praesertim multa ac divinitus ipsis

Immortalibu' de divis dare dicta suërit
Atque omnem rerum naturam pandere dictis.

Cuius ego ingressus vestigia dum rationes 55
Persequor ac doceo dictis, quo quaeque creata
Foedere sint, in eo quam sit durare necessum
Nec validas valeant aevi rescindere leges,
Quo genere in primis animi natura reperta est
Nativo primum consistere corpore creta 60
Nec posse incolumis magnum durare per aevum,
Sed simulacra solere in somnis fallere mentem,
Cernere cum videamur eum quem vita reliquit,
Quod superest, nunc huc rationis detulit ordo,
Ut mihi mortali consistere corpore mundum 65
Nativumque simul ratio reddunda sit esse ;
Et quibus ille modis congressus materiai
Fundarit terram caelum mare sidera solem
Lunaique globum ; tum quae tellure animantes
Extiterint, et quae nullo sint tempore natae ; 70
Quove modo genus humanum variante loquella
Coeperit inter se vesci per nomina rerum ;
Et quibus ille modis divom metus insinuarit
Pectora, terrarum qui in orbi sancta tuetur
Fana lacus lucos aras simulacraque divom. 75
Praeterea solis cursus lunaeque meatus
Expediam qua vi flectat natura gubernans ;
Ne forte haec inter caelum terramque reamur
Libera sponte sua cursus lustrare perennes
Morigera ad fruges augendas atque animantes, 80
Neve aliqua divum volvi ratione putemus.
Nam bene qui didicere deos securum agere aevom,
Si tamen interea mirantur qua ratione
Quaeque geri possint, praesertim rebus in illis
Quae supera caput aetheriis cernuntur in oris, 85

Rursus in antiquas referuntur religiones
 Et dominos acres adsciscunt, omnia posse
 Quos miseri credunt, ignari quid queat esse,
 Quid nequeat, finita potestas denique cuique
 Quanam sit ratione atque alte terminus haerens. 90
 Quod superest, ne te in promissis plura moremur,
 Principio maria ac terras caelumque tuere;
 Quorum naturam triplicem, tria corpora, Memmi,
 Tres species tam dissimiles, tria talia texta,
 Una dies dabit exitio, multosque per annos 95
 Sustentata ruet moles et machina mundi.
 Nec me animi fallit quam res nova miraque menti
 Accidat exitium caeli terraeque futurum,
 Et quam difficile id mihi sit pervincere dictis;
 Ut fit ubi insolitam rem adportes auribus ante 100
 Nec tamen hanc possis oculorum subdere visu
 Nec iacere indu manus, via qua munita fidei
 Proxima fert humanum in pectus templaque mentis.
 Sed tamen effabor. Dictis dabit ipsa fidem res
 Forsitan et graviter terrarum motibus ortis 105
 Omnia conquassari in parvo tempore cernes.
 Quod procul a nobis flectat fortuna gubernans,
 Et ratio potius quam res persuadeat ipsa
 Succidere horrisono posse omnia victa fragore.
 Qua prius adgrediar quam de re fundere fata 110
 Sanctius et multo certa ratione magis quam
 Pythia quae tripode a Phoebi lauroque profatur,
 Multa tibi expediam doctis solacia dictis;
 Religione refrenatus ne forte rearis
 Terras et solem et caelum, mare sidera lunam, 115
 Corpore divino debere aeterna manere,
 Proptereaque putes ritu par esse Gigantum
 Pendere eos poenas inmani pro scelere omnes

Qui ratione sua disturbent moenia mundi
 Praeclarumque velint caeli restinguere solem, 120
 Immortalia mortali sermone notantes ;
 Quae procul usque adeo divino a numine distant,
 Inque deum numero quae sint indigna videntur,
 Notitiam potius praebere ut posse putentur
 Quid sit vitali motu sensuque remotum. 125
 Quippe etenim non est, cum quovis corpore ut esse
 Posse animi natura putetur consiliumque ;
 Sicut in aethere non arbor, non aequore salso
 Nubes esse queunt neque pisces vivere in arvis
 Nec cruor in lignis neque saxis sucus inesse. 130
 Certum ac dispositumst ubi quicquid crescat et insit.
 Sic animi natura nequit sine corpore oriri
 Sola neque a nervis et sanguine longiter esse.
 Quod si (posset enim multo prius) ipsa animi vis
 In capite aut umeris aut imis calcibus esse 135
 Posset et innasci quavis in parte, soleret
 Tandem in eodem homine atque in eodem vase manere.
 Quod quoniam nostro quoque constat corpore certum
 Dispositumque videtur ubi esse et crescere possit
 Seorsum anima atque animus, tanto magis infitiandum 140
 Totum posse extra corpus formamque animalem
 Putribus in glebis terrarum aut solis in igni
 Aut in aqua durare aut altis aetheris oris.
 Haud igitur constant divino praedita sensu,
 Quandoquidem nequeunt vitaliter esse animata. 145
 Illud item non est ut possis credere, sedes
 Esse deum sanctas in mundi partibus ullis.
 Tenuis enim natura deum longeque remota
 Sensibus ab nostris animi vix mente videtur ;
 Quae quoniam manuum tactum suffugit et ictum, 150
 Tactile nil nobis quod sit contingere debet.

Tangere enim non quit quod tangi non licet ipsum.
 Quare etiam sedes quoque nostris sedibus esse
 Dissimiles debent, tenues de corpore eorum;
 Quae tibi posterius largo sermone probabo. 155
 Dicere porro hominum causa voluisse parare
 Praeclaram mundi naturam proptereaque
 Adlaudabile opus divom laudare decere
 Aeternumque putare atque immortale futurum,
 Nec fas esse, deum quod sit ratione vetusta 160
 Gentibus humanis fundatum perpetuo aevo,
 Sollicitare suis ulla vi ex sedibus umquam
 Nec verbis vexare et ab imo evertere summa,
 Cetera de genere hoc adfingere et addere, Memmi,
 Desiperest. Quid enim immortalibus atque beatis 165
 Gratia nostra queat largiri emolumentum,
 Ut nostra quicquam causa gerere adgrediantur?
 Quidve novi potuit tanto post ante quietos
 Inlicere ut cuperent vitam mutare priorem?
 Nam gaudere novis rebus debere videtur 170
 Cui veteres obsunt; sed cui nil accidit aegri
 Tempore in anteacto, cum pulchre degeret aevum,
 Quid potuit novitatis amorem accendere tali?
 At, credo, in tenebris vita ac maerore iacebat,
 Donec diluxit rerum genitalis origo. 175
 Quidve mali fuerat nobis non esse creatis?
 Natus enim debet quicumque est velle manere
 In vita, donec retinebit blanda voluptas.
 Qui numquam vero vitae gustavit amorem
 Nec fuit in numero, quid obest non esse creatum? 180
 Exemplum porro gignundis rebus et ipsa
 Notities divis hominum unde est insita primum,
 Quid vellent facere ut scirent animoque viderent?
 Quo ve modost umquam vis cognita principiorum

Quidque inter sese permutato ordine possent, 185
 Si non ipsa dedit specimen natura creandi?
 Namque ita multa modis multis primordia rerum
 Ex infinito iam tempore percita plagis
 Ponderibusque suis consuerunt concita ferri
 Omnimodisque coire atque omnia pertemptare, 190
 Quaecumque inter se possent congressa creare,
 Ut non sit mirum si in tales disposituras
 Deciderunt quoque et in tales venere meatus,
 Qualibus haec rerum geritur nunc summa novando.
 Quod si iam rerum ignorem primordia quae sint, 195
 Hoc tamen ex ipsis caeli rationibus ausim
 Confirmare aliisque ex rebus reddere multis,
 Nequaquam nobis divinitus esse paratam
 Naturam rerum; tanta stat praedita culpa.
 Principio quantum caeli tegit impetus ingens, 200
 Inde avidi partem montes silvaeque ferarum
 Possedere, tenent rupes vastaeque paludes
 Et mare quod late terrarum distinet oras.
 Inde duas porro prope partes fervidus ardor
 Adsiduusque geli casus mortalibus aufert. 205
 Quod superest arvi, tamen id natura sua vi
 Sentibus obducat, ni vis humana resistat
 Vitai causa valido consueta bidenti
 Ingemere et terram pressis proscindere aratris.
 Si non fecundas vertentes vomere glebas 210
 Terraique solum subigentes cimus ad ortus,
 Sponte sua nequeant liquidas existere in auras,
 Et tamen interdum magno quaesita labore
 Cum iam per terras frondent atque omnia florent,
 Aut nimiis torret fervoribus aetherius sol 215
 Aut subiti peremunt imbres gelidaeque pruinae,
 Flabraque ventorum violento turbine vexant.

Praeterea genus horrifera natura ferarum
 Humanae genti infestum terraque marique
 Cur alit atque auget? cur anni tempora morbos 220
 Adportant? quare mors inmatura vagatur?
 Tum porro puer, ut saevis proiectus ab undis
 Navita, nudus humi iacet, infans, indigus omni
 Vitali auxilio, cum primum in luminis oras
 Nixibus ex alvo matris natura profudit, 225
 Vagituque locum lugubri complet, ut aequumst
 Cui tantum in vita restet transire malorum.
 At variae crescunt pecudes armenta feraeque
 Nec crepitacillis opus est nec cuiquam adhibendast
 Almae nutricis blanda atque infracta loquella 230
 Nec varias quaerunt vestes pro tempore caeli,
 Denique non armis opus est, non moenibus altis,
 Qui sua tutentur, quando omnibus omnia large
 Tellus ipsa parit naturaque daedala rerum.
 Principio quoniam terrai corpus et umor 235
 Aurarumque leves animae calidique vapores,
 E quibus haec rerum consistere summa videtur,
 Omnia nativo ac mortali corpore constant,
 Debet eodem omnis mundi natura putari.
 Quippe etenim quorum partes et membra videmus 240
 Corpore nativo ac mortalibus esse figuris,
 Haec eadem ferme mortalia cernimus esse
 Et nativa simul. Quapropter maxima mundi
 Cum videam membra ac partes consumpta regigni,
 Scire licet caeli quoque item terraeque fuisse 245
 Principiale aliquod tempus clademque futuram.
 Illud in his rebus ne corripuisse rearis
 Me mihi, quod terram atque ignem mortalia sumpsi
 Esse neque umorem dubitavi aurasque perire
 Atque eadem gigni rursusque augescere dixi, 250

Principio pars terrai nonnulla, perusta
 Solibus adsiduis, multa pulsata pedum vi,
 Pulveris exhalat nebulam nubesque volantes
 Quas validi toto dispergunt aere venti.
 Pars etiam glebarum ad diluviem revocatur 255
 Imbribus et ripas radentia flumina rodunt.
 Praeterea pro parte sua, quodcumque alid auget,
 Redditur; et quoniam dubio procul esse videtur
 Omniparens eadem rerum commune sepulcrum,
 Ergo terra tibi libatur et aucta recrescit. 260

Quod superest, umore novo mare flumina fontes
 Semper abundare et latices manare perennes
 Nil opus est verbis: magnus decursus aquarum
 Undique declarat. Sed primum quicquid aquai
 Tollitur in summaque fit ut nil umor abundet, 265
 Partim quod validi verrentes aequora venti
 Diminuunt radiisque retexens aetherius sol,
 Partim quod subter pei terras diditur omnes.
 Percolatur enim virus retroque remanat
 Materies umoris et ad caput amnibus omnis 270
 Convenit, inde super terras fluit agmine dulci
 Qua via secta semel liquido pede detulit undas.

Aera nunc igitur dicam qui corpore toto
 Innumerabiliter privas mutatur in horas.
 Semper enim, quodcumque fluit de rebus, id omne 275
 Aeris in magnum fertur mare; qui nisi contra
 Corpora retribuatur rebus recreetque fluentes,
 Omnia iam resoluta forent et in aera versa.
 Haud igitur cessat gigni de rebus et in res
 Reccidere, adsidue quoniam fluere omnia constat. 280

Largus item liquidi fons luminis, aetherius sol,
 Inrigat adsidue caelum candore recenti
 Suppeditatque novo confestim lumine lumen.

Nam primum quicquid fulgoris disperit ei,
 Quocumque accidit. Id licet hinc cognoscere possis, 285
 Quod simul ac primum nubes succedere soli
 Coepere et radios inter quasi rumpere lucis,
 Extemplo inferior pars horum disperit omnis
 Terraque inunbratur qua nimbi cumque feruntur;
 Ut noscas splendore novo res semper egere 290
 Et primum iactum fulgoris quemque perire
 Nec ratione alia res posse in sole videri,
 Perpetuo ni suppeditet lucis caput ipsum.
 Quin etiam nocturna tibi, terrestria quae sunt,
 Lumina, pendentes lychini claraeque coruscis 295
 Fulguribus pingues multa caligine taedae
 Consimili properant ratione, ardore ministro,
 Suppeditare novum lumen, tremere ignibus instant,
 Instant, nec loca lux inter quasi rupta relinquit.
 Usque adeo properanter ab omnibus ignibus ei 300
 Exitium celeri celatur origine flammae.
 Sic igitur solem lunam stellasque putandumst
 Ex alio atque alio lucem iactare subortu
 Et primum quicquid flammaram perdere semper;
 Inviolabilia haec ne credas forte vigere. 305
 Denique non lapides quoque vinci cernis ab aevo,
 Non altas turres ruere et putrescere saxa,
 Non delubra deum simulacraque fessa fatisci,
 Nec sanctum numen fati protollere fines
 Posse neque adversus naturae foedera niti? 310
 Denique non monimenta virum dilapsa videmus,
 Aeraque proporro solidumque senescere ferrum,
 Non ruere avolsos silices a montibus altis
 Nec validas ævi vires perferre patique
 Finiti? neque enim caderent avolsa repente, 315
 Ex infinito quae tempore pertolerassent

Omnia tormenta aetatis privata fragore.

Denique iam tuere hoc, circum supraque quod omnem
 Continet amplexu terram: si procreat ex se
 Omnia, quod quidam memorant, recipitque perempta, 320
 Totum nativum mortali corpore constat.

Nam quodcumque alias ex se res auget alitque,
 Deminui debet, recreari, cum recipit res.

Praeterea si nulla fuit genitalis origo
 Terrarum et caeli semperque aeterna fuere, 325

Cur supera bellum Thebanum et funera Troiae
 Non alias alii quoque res cecinere poetae?

Quo tot facta virum totiens cecidere neque usquam
 Aeternis famae monumentis insita florent?

Verum, ut opinor, habet novitatem summa recensque 330
 Naturast mundi neque pridem exordia cepit.

Quare etiam quaedam nunc artes expoliuntur,
 Nunc etiam augescunt; nunc addita navigiis sunt
 Multa, modo organici melicos peperere sonores.

Denique natura haec rerum ratioque repertast 335

Nuper, et hanc primus cum primis ipse repertus
 Nunc ego sum in patrias qui possim vertere voces.

Quod si forte fuisse antehac eadem omnia credis,

Sed periisse hominum torrenti saecla vapore,
 Aut cecidisse urbes magno vexamine mundi, 340

Aut ex imbris adsiduis exisse rapaces

Per terras amnes atque oppida cooperuisse,

Tanto quique magis victus fateare necessest

Exitium quoque terrarum caelique futurum.

Nam cum res tantis morbis tantisque periclis 345

Temptarentur, ibi si tristior incubuisset

Causa, darent late cladem magnasque ruinas.

Nec ratione alia mortales esse videmur

Inter nos, nisi quod morbis aegrescimus isdem

Atque illi quos a vita natura removit. 350
 Praeterea quaecumque manent aeterna necessumst
 Aut, quia sunt solido cum corpore, respuere ictus
 Nec penetrare pati sibi quicquam quod queat artas
 Dissociare intus partes, ut materiai
 Corpora sunt quorum naturam ostendimus ante, 355
 Aut ideo durare aetatem posse per omnem,
 Plagarum quia sunt expertia, sicut inane est
 Quod manet intactum neque ab ictu fungitur hilum,
 Aut etiam quia nulla loci fit copia circum,
 Quo quasi res possint discedere dissoluique, 360
 Sicut summarum summa est aeterna neque extra
 Qui locus est quo dissiliant neque corpora sunt quae
 Possint incidere et valida dissolvere plaga.
 At neque, uti docui, solido cum corpore mundi
 Naturast, quoniam admixtumst in rebus inane; 365
 Nec tamen est ut inane, neque autem corpora desunt,
 Ex infinito quae possint forte coorta
 Corruere hanc rerum violento turbine summam
 Aut aliam quamvis cladem inportare pericli;
 Nec porro natura loci spatiumque profundi 370
 Deficit, exspargi quo possint moenia mundi;
 Aut alia quavis possunt vi pulsa perire.
 Haud igitur leti praeclusa est ianua caelo
 Nec soli terraeque neque altis aequoris undis,
 Sed patet immane et vasto respectat hiatu. 375
 Quare etiam nativa necessumst confiteare
 Haec eadem; neque enim, mortali corpore quae sunt,
 Ex infinito iam tempore adhuc potuissent
 Inmensi validas aevi contemnere vires.
 Denique tantopere inter se cum maxima mundi 380
 Pugnent membra, pio nequaquam concita bello,
 Nonne vides aliquam longi certaminis ollis

Posse dari finem? vel cum sol et vapor omnis
 Omnibus epotis umoribus exsuperarint:
 Quod facere intendunt, neque adhuc conata patrarunt: 385
 Tantum suppeditant amnes ultraque minantur
 Omnia diluviare ex alto gurgite ponti;
 Nequiquam, quoniam verrentes aequora venti
 Deminuunt radiisque retexens aetherius sol,
 Et siccare prius confidunt omnia posse 390
 Quam liquor incepti possit contingere finem.
 Tantum spirantes aequo certamine bellum
 Magnis inter se de rebus cernere certant,
 Cum semel interea fuerit superantior ignis 395
 Et semel, ut fama est, umor regnarit in arvis.
 Ignis enim superat et lambens multa perussit,
 Avia cum Phaethonta rapax vis solis equorum
 Aethere raptavit toto terrasque per omnes.
 At pater omnipotens ira tum percitus acri
 Magnanimum Phaethonta repentis fulminis ictu 400
 Deturbavit equis in terram, solque cadenti
 Obvius aeternam suscepit lampada mundi
 Disiectosque redegit equos iunxitque trementes,
 Inde suum per iter recreavit cuncta gubernans,
 Scilicet ut veteres Graium cecinere poetae. 405
 Quod procul a vera nimis est ratione repulsum.
 Ignis enim superare potest ubi materiali
 Ex infinito sunt corpora plura coorta;
 Inde cadunt vires aliqua ratione revictae,
 Aut pereunt res exustae torrentibus auris. 410
 Umor item quondam coepit superare coortus,
 Ut fama est, hominum multas quando obruit urbes.
 Inde ubi vis aliqua ratione aversa recessit,
 Ex infinito fuerat quaecumque coorta,
 Constiterunt imbres et flumina vim minuerunt. 415

Sed quibus ille modis coniectus materiai
 Fundarit terram et caelum pontique profunda,
 Solis lunai cursus, ex ordine ponam.
 Nam certe neque consilio primordia rerum
 Ordine se suo quaeque sagaci mente locarunt 420
 Nec quos quaeque darent motus pepigere profecto,
 Sed quia multa modis multis primordia rerum
 Ex infinito iam tempore percita plagis
 Ponderibusque suis consuerunt concita ferri
 Omnimodisque coire atque omnia pertemptare, 425
 Quaecumque inter se possent congressa creare,
 Propterea fit uti magnum volgata per aevom
 Omne genus coetus et motus experiundo
 Tandem convenient ea quae convecta repente
 Magnarum rerum fiunt exordia saepe, 430
 Terrai maris et caeli generisque animantum.
 Hic neque tum solis rota cerni lumine largo
 Alti volans poterat nec magni sidera mundi
 Nec mare nec caelum nec denique terra neque aer
 Nec similis nostris rebus res ulla videri, 435
 Sed nova tempestas quaedam molesque coorta
 Omne genus de principiis, discordia quorum
 Intervalla vias conexus pondera plagas
 Concursus motus turbabat proelia miscens,
 Propter dissimiles formas variasque figuras 440
 Quod non omnia sic poterant coniuncta manere
 Nec motus inter sese dare convenientes.
 Diffugere inde loci partes coepere parèsque
 Cum paribus iungi res et discludere mundum
 Membraque dividere et magnas disponere partes, 445
 Hoc est, a terris altum discernere caelum,
 Et sorsum mare uti secreto umore pateret,
 Seorsus item puri secretique aetheris ignes.

Quippe etenim primum terrai corpora quaeque,
 Propterea quod erant gravia et perplexa, coibant 450
 In medio atque imas capiebant omnia sedes;
 Quae quanto magis inter se perplexa coibant,
 Tam magis expressere ea quae mare sidera solem
 Lunamque efficerent et magni moenia mundi.
 Omnia enim magis haec e levibus atque rotundis 455
 Seminibus multoque minoribu' sunt elementis
 Quam tellus. Ideo, per rara foramina, terrae
 Partibus erumpens primus se sustulit aether
 Ignifer et multos secum levis abstulit ignes;
 Non alia longe ratione ac saepe videmus, 460
 Aurea cum primum gemmantes rore per herbas
 Matutinarubent radiati lumina solis
 Exhalantque lacus nebulam fluviique perennes,
 Ipsaque ut interdum tellus fumare videtur;
 Omnia quae sursum cum conciliantur, in alto 465
 Corpore concreto subtexunt nubila caelum.
 Sic igitur tum se levis ac diffusilis aether
 Corpore concreto circumdatus undique flexit
 Et late diffusus in omnes undique partes
 Omnia sic avido complexu cetera saepsit. 470
 Hunc exordia sunt solis lunaeque secuta,
 Interutrasque globi quorum vertuntur in auris;
 Quae neque terra sibi adscivit nec maximus aether,
 Quod neque tam fuerunt gravia ut depressa sederent,
 Nec levia ut possent per summas labier oras, 475
 Et tamen interutrasque ita sunt ut corpora viva
 Versent et partes ut mundi totius extent;
 Quod genus in nobis quaedam licet in statione
 Membra manere, tamen cum sint ea quae moveantur.
 His igitur rebus retractis terra repente, 480
 Maxima qua nunc se ponti plaga caerula tendit,

Succidit et salso suffudit gurgite fossas.
 Inque dies quanto circum magis aetheris, aestus
 Et radii solis cogeant undique terram
 Verberibus crebris extrema ad limina in artum, 485
 In medio ut propulsa suo condensa coiret,
 Tam magis expressus salsus de corpore sudor
 Augebat mare manando camposque natantes,
 Et tanto magis illa foras elapsa volabant
 Corpora multa vaporis et aeris altaque caeli 490
 Densebant procul a terris fulgentia templa.
 Sidebant campi, crescebant montibus altis
 Ascensus; neque enim poterant subsidere saxa
 Nec pariter tantundem omnes succumbere partes.
 Sic igitur terrae concreto corpore pondus 495
 Constitit atque omnis mundi quasi limus in imum
 Confluxit gravis et subsedit funditus ut faex;
 Inde mare inde aer inde aether ignifer ipse
 Corporibus liquidis sunt omnia pura relictas,
 Et leviora aliis alia, et liquidissimus aether 500
 Atque levissimus aeris super influit auras,
 Nec liquidum corpus turbantibus aeris auris
 Commiscet; sinit haec violentis omnia verti
 Turbinibus, sinit incertis turbare procellis,
 Ipse suos ignes certo fert impete labens. 505
 Nam modice fluere atque uno posse aethera nisu
 Significat Pontos, mare certo quod fluit aestu
 Unum labendi conservans usque tenorem.
 Motibus astrorum nunc quae sit causa canamus.
 Principio magnus caeli si vertitur orbis, 510
 Ex utraque polum parti premere aera nobis
 Dicendum est extraque tenere et claudere utrimque;
 Inde alium supra fluere atque intendere eodem
 Quo volvenda micant aeterni sidera mundi;

Aut alium subter, contra qui subvehat orbem, 515
 Ut fluvios versare rotas atque haustra videmus.
 Est etiam quoque uti possit caelum omne manere
 In statione tamen cum lucida signa ferantur ;
 Sive quod inclusi rapidi sunt aetheris aestus
 Quaerentesque viam circum versantur et ignes 520
 Passim per caeli volvunt Summania templa ;
 Sive aliunde fluens alicunde extrinsecus aer
 Versat agens ignes ; sive ipsi serpere possunt
 Quo cuiusque cibus vocat atque invitat euntes,
 Flammea per caelum pascentes corpora passim. 525
 Nam quid in hoc mundo sit eorum ponere certum
 Difficile est ; sed quid possit fiatque per omne
 In variis mundis varia ratione creatis,
 Id doceo pluresque sequor disponere causas,
 Motibus astrorum quae possint esse per omne ; 530
 E quibus una tamen sit in hoc quoque causa necessest
 Quae vegeat motum signis ; sed quae sit earum
 Praecipere haudquaquamst pedetemptim progredientis.
 Terraque ut in media mundi regione quiescat,
 Evanescere paulatim et decrescere pondus 535
 Convenit, atque aliam naturam subter habere
 Ex ineunte aevo coniunctam atque uniter aptam
 Partibus aeriis mundi quibus insita vivit.
 Propterea non est oneri neque deprimit auras ;
 Ut sua cuique homini nullo sunt pondere membra 540
 Nec caput est oneri collo nec denique totum
 Corporis in pedibus pondus sentimus inesse ;
 At quaecumque foris veniunt impostaque nobis
 Pondera sunt laedunt, permulto saepe minora.
 Usque adeo magni refert quid quaeque obeat res. 545
 Sic igitur tellus non est aliena repente
 Allata atque auris aliunde obiecta alienis,

Sed pariter prima concepta ab origine mundi
 Certaue pars eius, quasi nobis membra videntur.
 Praeterea grandi tonitru concussa repente 550
 Terra supra quae se sunt concutit omnia motu;
 Quod facere haud ulla posset ratione, nisi esset
 Partibus aeriis mundi caeloque reuincta.
 Nam communibús inter se radicibus haerent
 Ex ineunte aevo coniuncta atque uniter apta. 555
 Nonne vides etiam quam magno pondere nobis
 Sustineat corpus tenuissima vis animai
 Propterea quia tam coniuncta atque uniter apta est?
 Denique iam saltu pernici tollere corpus
 Quid potis est nisi vis animi quae membra gubernat? 560
 Iamne vides quantum tenuis natura valere
 Possit, ubi est coniuncta gravi cum corpore, ut aer
 Coniunctus terris et nobis est animi vis?
 Nec nimio solis maior rota nec minor ardor
 Esse potest, nostris quam sensibus esse videtur. 565
 Nam quibus e spatiis cumque ignes lumina possunt
 Adicere et calidum membris adflare vaporem,
 Nil illa his intervallis de corpore libant
 Flammarum, nil ad speciem est contractior ignis.
 Proinde, calor quoniam solis lumenque profusum 570
 Perveniant nostros ad sensus et loca mulcent,
 Forma quoque hinc solis debet filumque videri,
 Nil adeo ut possis plus aut minus addere, vere.
 Lunaque sive notho fertur loca lumine lustrans 575
 Sive suam proprio iactat de corpore lucem,
 Quidquid id est, nilo fertur maiore figura
 Quam, nostris oculis qua cernimus, esse videtur.
 Nam prius omnia, quae longe semota tuemur
 Aera per multum, specie confusa videntur 580
 Quam minui filum. Quapropter luna necesse est,

Quandoquidem claram speciem certamque figuram
 Praebet, ut est oris extremis cumque notata
 Quantaque quantast hinc nobis videatur in alto.
 Postremo quoscumque vides hinc aetheris ignes; 585
 Quandoquidem quoscumque in terris cernimus ignes,
 Dum tremor est clarus, dum cernitur ardor eorum,
 Perparvum quiddam interdum mutare videtur
 Alteram utram in partem filum, quo longius absunt;
 Scire licet perquam pauxillo posse minores 590
 Esse vel exigua maiores parte brevique.

Illud item non est mirandum, qua ratione
 Tantulus ille queat tantum sol mittere lumen,
 Quod maria ac terras omnes caelumque rigando
 Compleat et calido perfundat cuncta vapore. 595
 Nam licet hinc mundi patefactum totius unum
 Largifluum fontem scatere atque erumpere lumen,
 Ex omni mundo quia sic elementa vaporis
 Undique conveniunt et sic coniectus eorum 600
 Confluit, ex uno capite hic ut profluat ardor.
 Nonne vides etiam quam late parvus aquai
 Prata riget fons interdum campisque redundet?
 Est etiam quoque uti non magno solis ab igni
 Aera percipiat calidis fervoribus ardor, 605
 Opportunus ita est si forte et idoneus aer,
 Ut queat accendi parvis ardoribus ictus;
 Quod genus interdum segetes stipulamque videmus
 Accidere ex una scintilla incendia passim.
 Forsitan et rosea sol alte lampade lucens 610
 Possideat multum caecis fervoribus ignem
 Circum se, nullo qui sit fulgore notatus,
 Aestifer ut tantum radiorum exaugeat ictum.

Nec ratio solis simplex et certa patescit,
 Quo pacto aestivis e partibus aegocerotis 615

Brumales adeat flexus atque inde revertens
 Cancri se ut vertat metas ad solstitiales,
 Lunaque mensibus id spatium videatur obire,
 Annua sol in quo consumit tempora cursu.
 Non, inquam, simplex his rebus reddita causast. 620
 Nam fieri vel cum primis id posse videtur,
 Democriti quod sancta viri sententia ponit,
 Quanto quaeque magis sint terram sidera propter,
 Tanto posse minus cum caeli turbine ferri.
 Evanescere enim rapidas illius et acres 625
 Imminui subter vires, ideoque relinqui
 Paulatim solem cum posterioribu' signis,
 Inferior multo quod sit quam fervida signa.
 Et magis hoc lunam: quanto demissior eius
 Cursus abest procul a caelo terrisque propinquat, 630
 Tanto posse minus cum signis tendere cursum.
 Flaccidiore etenim quanto iam turbine fertur
 Inferior quam sol, tanto magis omnia signa
 Hanc adipiscuntur circum praeterque feruntur.
 Propterea fit ut haec ad signum quodque reverti 635
 Mobilius videatur, ad hanc quia signa revisunt.
 Fit quoque ut e mundi transversis partibus aer
 Alternis certo fluere alter tempore possit,
 Qui queat aestivis solem detrudere signis
 Brumales usque ad flexus gelidumque rigorem, 640
 Et qui reiciat gelidis a frigoris umbris
 Aestiferas usque in partes et fervida signa.
 Et ratione pari lunam stellasque putandumst,
 Quae volvunt magnos in magnis orbibus annos,
 Aeribus posse alternis e partibus ire. 645
 Nonne vides etiam diversis nubila ventis
 Diversas ire in partes inferna supernis?
 Qui minus illa queant per magnos aetheris orbes

Aestibus inter se diversis sidera ferri?

At nox obruit ingenti caligine terras, 650

Aut ubi de longo cursu sol ultima caeli

Impulit atque suos efflavit languidus ignes

Concussos itere et labefactos aere multo,

Aut quia sub terras cursum convertere cogit

Vis eadem, supra quae terras pertulit orbem. 655

Tempore item certo roseam Matuta per oras

Aetheris auroram differt et lumina pandit,

Aut quia sol idem, sub terras ille revertens,

Anticipat caelum radiis accendere temptans,

Aut quia conveniunt ignes et semina multa 660

Confluere ardoris consuerunt tempore certo,

Quae faciunt solis novam semper lumina gigni;

Quod genus Idaeis fama est e montibus altis

Dispersos ignes orienti lumine cerni,

Inde coire globum quasi in unum et conficere orbem. 665

Nec tamen illud in his rebus mirabile debet

Esse, quod haec ignis tam certo tempore possunt

Semina confluere et solis reparare nitorem.

Multa videmus enim, certo quae tempore fiunt

Omnibus in rebus. Florescunt tempore certo 670

Arbusta et certo dimittunt tempore florem.

Nec minus in certo dentes cadere imperat aetas

Tempore et impubem molli pubescere veste

Et pariter mollem malis demittere barbam.

Fulmina postremo nix imbres nubila venti 675

Non nimis incertis fiunt in partibus anni.

Namque ubi sic fuerunt causarum exordia prima,

Atque ita res mundi cecidere ab origine prima,

Consequē quoque iam redeunt ex ordine certo.

Crescere itemque dies licet et tabescere noctes, 680

Et minui luces cum sumant augmina noctes,

Aut quia sol idem sub terras atque superne
 Imparibus currens amfractibus aetheris oras
 Partit et in partes non aequas dividit orbem,
 Et quod ab alterutra detraxit parte, reponit 685
 Eius in adversa tanto plus parte relatus,
 Donec ad id signum caeli pervenit, ubi anni
 Nodus nocturnas exaequat lucibus umbras.
 Nam, medio cursu flatus aquilonis et austri,
 Distinet aequato caelum discrimine metas 690
 Propter signiferi posituram totius orbis,
 Annua sol in quo concludit tempora serpens,
 Obliquo terras et caelum lumine lustrans,
 Ut ratio declarat eorum qui loca caeli
 Omnia dispositis signis ornata notarunt. 695
 Aut quia crassior est certis in partibus aer,
 Sub terris ideo tremulum iubar haesitat ignis
 Nec penetrare potest facile atque emergere ad ortus.
 Propterea noctes hiberno tempore longae
 Cessant, dum veniat radiatum insigne diei. 700
 Aut etiam, quia sic alternis partibus anni
 Tardius et citius consuerunt confluere ignes
 Qui faciunt solem certa desurgere parte,
 Propterea fit uti videantur dicere verum
Qui faciunt solis semper nova lumina gigni.
 Luna potest solis radiis percussa nitere 705
 Inque dies magis id lumen convertere nobis
 Ad speciem, quantum solis secedit ab orbi,
 Donique eum contra pleno bene lumine fulsit
 Atque oriens obitus eius super edita vidit;
 Inde minutatim retro quasi condere lumen
 Debet item, quanto propius iam solis ad ignem 710
 Labitur ex alia signorum parte per orbem;
 Ut faciunt, lunam qui fingunt esse pilai

Consimilem cursusque viam sub sole tenere.
 Est etiam quare proprio cum lumine possit 715
 Volvier et varias splendoris reddere formas.
 Corpus enim licet esse aliud quod fertur et una
 Labitur omnimodis occursans officiensque
 Nec potis est cerni, quia cassum lumine fertur.
 Versarique potest, globus ut, si forte, pilai 720
 Dimidia ex parti candenti lumine tinctus,
 Versandoque globum variantes edere formas,
 Donique eam partem, quaecumque est ignibus aucta,
 Ad speciem vertit nobis oculosque patentes;
 Inde minutatim retro contorquet et aufert 725
 Luciferam partem glomeraminis atque pilai;
 Ut Babylonica Chaldaeum doctrina refutans
 Astrologorum artem contra convincere tendit,
 Proinde quasi id fieri nequeat quod pugnat uterque
 Aut minus hoc illo sit cur amplectier ausis. 730
 Denique cur nequeat semper nova luna creari
 Ordine formarum certo certisque figuris
 Inque dies privos aborisci quaeque creata
 Atque alia illius reparari in parte locoque,
 Difficilest ratione docere et vincere verbis, 735
 Ordine cum possint tam certo multa creari.
 It ver et Venus, et Veneris praenuntius ante
 Pennatus graditur, zephyri vestigia propter
 Flora quibus mater praespargens ante viai
 Cuncta coloribus egregiis et odoribus opplet. 740
 Inde loci sequitur calor aridus et comes una
 Pulverulenta Ceres et etesia flabra aquilonum.
 Inde autumnus adit, graditur simul Euhius Euan.
 Inde aliae tempestates ventique sequuntur,
 Altitonans Volturnus et auster fulmine pollens. 745
 Tandem bruma nives adfert pigrumque rigorem

Reddit: hiemps sequitur crepitans hanc dentibus algu.
 Quo minus est mirum si certo tempore luna
 Gignitur et certo deletur tempore rusus,
 Cum fieri possint tam certo tempore multa. 750

Solis item quoque defectus lunaeque latebras
 Pluribus e causis fieri tibi posse putandumst.
 Nam cur luna queat terram secludere solis
 Lumine et a terris altum caput obstruere ei,
 Obiciens caecum radiis ardentibus orbem; 755

Tempore eodem aliud facere id non posse putetur
 Corpus quod cassum labatur lumine semper?
 Solque suos etiam dimittere languidus ignes
 Tempore cur certo nequeat recreareque lumen,
 Cum loca praeteriit flammis infesta per auras, 760

Quae faciunt ignes interstingui atque perire?
 Et cur terra queat lunam spoliare vicissim
 Lumine et oppressum solem super ipsa tenere,
 Menstrua dum rigidas coni perlabitur umbras;
 Tempore eodem aliud nequeat succurrere lunae 765

Corpus vel supra solis perlabier orbem,
 Quod radios interrumpat lumenque profusum?
 Et tamen ipsa suo si fulget luna nitore,
 Cur nequeat certa mundi languescere parte,
 Dum loca luminibus propriis inimica per exit? 770

Quod superest, quoniam magni per caerula mundi
 Qua fieri quicquid posset ratione resolvi,
 Solis uti varios cursus lunaeque meatus
 Noscere possemus quae vis et causa cieret, 775

Quove modo possent offecto lumine obire
 Et neque opinantes tenebris obducere terras,
 Cum quasi conivent et aperto lumine rursum
 Omnia convisunt clara loca candida luce;
 Nunc redeo ad mundi novitatem et mollia terrae 780

Arva, novo fetu quid primum in luminis oras
Tollere et incertis crerint committere ventis.

Principio genus herbarum viridemque nitorem
Terra dedit circum colles camposque per omnes;
Florida fulserunt viridanti prata colore, 785
Arboribusque datumst variis exinde per auras
Crescendi magnum inmissis certamen habenis.

Ut pluma atque pili primum saetaeque creantur
Quadripedum membris et corpore pennipotentum,
Sic nova tum tellus herbas virgultaque primum 790
Sustulit, inde loci mortalia saecla creavit

Multa modis multis varia ratione coorta.
Nam neque de caelo cecidisse animalia possunt
Nec terrestria de salsis exisse lacunis.

Linqitur ut merito maternum nomen adepta 795
Terra sit, e terra quoniam sunt cuncta creata.
Multaque nunc etiam existunt animalia terris
Imbribus et calido solis concreta vapore;

Quo minus est mirum si tum sunt plura coorta
Et maiora, nova tellure atque aethere adulta. 800

Principio genus alituum variaeque volucres
Ova relinquebant exclusae tempore verno,
Folliculos ut nunc teretes aestate cicadae
Linquunt sponte sua victum vitamque petentes.

Tum tibi terra dedit primum mortalia saecla. 805

Multus enim calor atque umor superabat in arvis.

Hoc ubi quaeque loci regio opportuna dabatur,
Crescebant uteri terram radicibus apti;

Quos ubi tempore maturo patefecerat aestus
Infantum fugiens umorem aurasque petessens, 810

Convertebat ibi natura foramina terrae
Et sucum venis cogebat fundere apertis
Consimilem lactis, sicut nunc femina quaeque

Cum peperit, dulci repletur lacte, quod omnis
 Impetus in mammas convertitur ille alimenti. 815
 Terra cibum pueris, vestem vapor, herba cubile
 Praebibat multa et molli lanugine abundans.
 At novitas mundi nec frigora dura ciebat
 Nec nimios aestus nec magnis viribus auras.
 Omnia enim pariter crescunt et robora sumunt. 820
 Quare etiam atque etiam maternum nomen adepta
 Terra tenet merito, quoniam genus ipsa creavit
 Humanum atque animal prope certo tempore fudit
 Omne quod in magnis bacchatur montibu' passim,
 Aeriasque simul volucres variantibu' formis. 825
 Sed quia finem aliquam pariendi debet habere,
 Destitit, ut mulier spatio defessa vetusto.
 Mutat enim mundi naturam totius aetas,
 Ex alioque alius status excipere omnia debet,
 Nec manet ulla sui similis res: omnia migrant, 830
 Omnia commutat natura et vertere cogit.
 Namque aliud putrescit et aevo debile languet,
 Porro aliud clarescit et e contemptibus exit.
 Sic igitur mundi naturam totius aetas
 Mutat et ex alio terram status excipit alter: 835
 Quod potuit nequit, ut possit quod non tulit ante.
 Multaque tum tellus etiam portenta creare
 Conatast mira facie membrisque coorta,
 Androgynum, interutrasque nec utrum, utrimque remotum,
 Orba pedum partim, manuum viduata vicissim, 840
 Muta sine ore etiam, sine voltu caeca reperta,
 Vincitque membrorum per totum corpus adhaesu,
 Nec facere ut possent quicquam nec cedere quoquam
 Nec vitare malum nec sumere quod foret usus.
 Cetera de genere hoc monstra ac portenta creabat; 845
 Nequiquam, quoniam natura absterruit auctum

Nec potuere cupitum aetatis tangere florem
 Nec reperire cibum nec iungi per Veneris res.
 Multa videmus enim rebus concurrere debere,
 Ut propagando possint procudere saecla. 850

Multaque tum interiisse animantum saecla necessest 855
 Nec potuisse propagando procudere prolem.

Nam quaecumque vides vesci vitalibus auris,
 Aut dolus aut virtus aut denique mobilitas est
 Ex ineunte aevo genus id tutata reservans.
 Multaque sunt, nobis ex utilitate sua quae 860

Commendata manent, tutelae tradita nostrae.
 Principio genus acre leonum saevaue saecla
 Tutatast virtus, volpes dolus et fuga cervos.
 At levisomna canum fido cum pectore corda

Et genus omne quod est veterino semine partum 865
 Lanigeraeque simul pecudes et bucera saecla
 Omnia sunt hominum tutelae tradita, Memmi.

Nam cupide fugere feras pacemque secuta
 Sunt et larga suo sine pabula parta labore,
 Quae damus utilitatis eorum praemia causa. 870

At quis nil horum tribuit natura, nec ipsa
 Sponte sua possent ut vivere nec dare nobis
 Utilitatem aliquam quare pateremur eorum
 Praesidio nostro pasci genus esseque tutum,

Scilicet haec aliis praedae lucroque iacebant 875
 Indupedita suis fatalibus omnia vinclis,
 Donec ad interitum genus id natura redegit.

Sed neque Centauri fuerunt, nec tempore in ullo
 Esse queunt duplici natura et corpore bino
 Ex alienigenis membris compacta, potestas 880

Hinc illinc visque ut non sat par esse potissit.
 Id licet hinc quamvis hebeti cognoscere corde.
 Principio circum tribus actis impiger annis

Floret equus, puer haudquaquam; nam saepe etiam nunc
 Ubera mammarum in somnis lactantia quaeret. 885
 Post ubi equum validae vires aetate senecta
 Membraque deficiunt fugienti languida vita,
 Tum demum puero illi aevo florente iuventas
 Occipit et molli vestit lanugine malas.
 Ne forte ex homine et veterino semine equorum 890
 Conferi credas Centauros posse neque esse,
 Aut rabidis canibus succinctas semimarinis
 Corporibus Scyllas et cetera de genere horum,
 Inter se quorum discordia membra videmus;
 Quae neque florescunt pariter nec roborum sumunt 895
 Corporibus neque proiciunt aetate senecta
 Nec simili Venere ardescunt nec moribus unis
 Conveniunt, neque sunt eadem iucunda per artus.
 Quippe videre licet pinguescere saepe cicuta
 Barbigeras pecudes, homini quae est acre venenum. 900
 Flamma quidem vero cum corpora fulva leonum
 Tam soleat torrere atque urere quam genus omne
 Visceris in terris quodcumque et sanguinis extet,
 Qui fieri potuit, triplici cum corpore ut una,
 Prima leo, postrema draco, media ipsa, Chimaera 905
 Ore foras acrem flaret de corpore flammam?
 Quare etiam tellure nova caeloque recenti
 Talia qui fingit potuisse animalia gigni,
 Nixus in hoc uno novitatis nomine inani,
 Multa licet simili ratione effutiat ore, 910
 Aurea tum dicat per terras flumina vulgo
 Fluxisse et gemmis florere arbusta suesse
 Aut hominem tanto membrorum esse impete natum,
 Trans maria alta pedum nisus ut ponere posset
 Et manibus totum circum se vertere caelum. 915
 Nam quod multa fuere in terris semina rerum

Tempore quo primum tellus animalia fudit,
 Nil tamen est signi mixtas potuisse creari
 Inter se pecudes compactaque membra animantum,
 Propterea quia quae de terris nunc quoque abundant 920
 Herbarum genera ac fruges arbustaque laeta
 Non tamen inter se possunt complexa creari,
 Sed res quaeque suo ritu procedit et omnes
 Foedere naturae certo discrimina servant.

At genus humanum multo fuit illud in arvis 925

Durius, ut decuit, tellus quod dura creasset,

Et maioribus et solidis magis ossibus intus

Fundatum, validis aptum per viscera nervis,

Nec facile ex aestu nec frigore quod caperetur

Nec novitate cibi nec labi corporis ulla. *illness - labor. archaic abl. 930*

Multaque per caelum solis volventia lustra *5-yr. periods i.e. years.*

Volgivo vitam tractabant more ferarum.

Nec robustus erat curvi moderator aratri

Quisquam, nec scibat ferro molirier arva

Nec nova defodere in terram virgulta neque altis . 935

Arboribus veteres decidere falçibu' ramos.

Quod sol atque imbres dederant, quod terra crearat

Sponte sua, satis id placabat pectora donum.

Glandiferas inter curabant corpora quercus

Plerumque; et quae nunc hiberno tempore cernis 940

Arbita puniceo fieri matura colore,

Plurima tum tellus etiam maiora ferebat.

Multaque praeterea novitas tum florida mundi

Pabula dura tulit, miseris mortalibus ampla.

At sedare sitim fluvii fontesque vocabant,

945

Ut nunc montibus e magnis decursus aquai

Claru' citat late (sientia saecula ferarum.)

Denique (nota vagi) silvestria templa tenebant

Nympharum, quibus e scibant umori' fluenta

Lubrica (^{abundante}proluvie larga)(lavere umida saxa,) 950
 Umida saxa, super viridi stillantia musco,
 Et partim plano scature atque erumpere campo.
 Necdum res igni scibant tractare neque uti
 Pellibus et(spoliis corpus vestire ferarum,)
 Sed nemora atque cavos montes silvasque colebant 955
 Et frutices inter condebant squalida membra
 Verbera ventorum vitare imbresque coacti.
 Nec commune bonum poterant spectare neque ullis
 Moribus inter se scibant nec legibus uti.
 Quod cuique obtulerat praedae fortuna, ferebat 960
 Sponte sua sibi quisque valere et vivere doctus.
 Et Venus in silvis iungebat corpora amantum;
 Conciliabat enim vel mutua quamque cupido
 Vel pretium, glandes atque arbita vel ^{peras}pira lecta. 965
 ↓ Et manuum mira freti virtute pedumque
 Consectabantur silvestria saecula ferarum
 Missilibus saxis et magno pondere clavae;
 Multaque vincebant, vitabant pauca latebris;
 Saetigerisque pares subu' sic silvestria membra 970
 Nuda dabant terrae nocturno tempore capti,
 Circum se foliis ac frondibus involventes.
 † Nec plangore diem magno solemque per agros
 Quaerebant pavidi palantes noctis in umbris,
 Sed taciti respectabant somnoque sepulti, 975
 Dum rosea face sol inferret lumina caelo....
 A parvis quod enim consuerant cernere semper
 Alterno tenebras et lucem tempore gigni,
 Non erat ut fieri posset mirarier umquam
 Nec diffidere ne terras aeterna teneret 980
 Nox in perpetuum detracto lumine solis.
 Sed magis illud erat curae, quod saecula ferarum
 Infestam miseris faciebant saepe quietem.

† Vel violenta vii vii atque impero
 libido

Eiectique domo fugiebant saxea tecta
 Spumigeri suis adventu validique leonis 985
 Atque intempesta cedebant nocte paventes
 Hospitibus saevis instrata cubilia fronde. ✕

Nec nimio tum plus quam nunc mortalia saecla
 Dulcia linquebant labentis lumina vitae.

Unus enim tum quisque magis deprensus eorum 990
 Pabula viva feris praebebat, dentibus haustus, *tan*
 Et nemora ac montes gemitu silvasque replebat
 Viva videns vivo sepeliri viscera busto.

At quos effugium servarat corpore adeso,
 Posterius tremulas super ulcera taetra tenentes 995
 Palmas horriferis accibant vocibus Orcum,
 Donique eos vita privarant vermina saeva

✕ Expertes opis, ignaros quid volnera vellent.
 At non multa virum sub signis milia ducta
 Una dies dabat exitio nec turbida ponti 1000
 Aequora fligebant naves ad saxa virosque.

Hic temere incassum frustra mare saepe coortum
 Saevibat leviterque minas ponebat inanes,
 Nec poterat quemquam placidi pellacia ponti
 Subdola pellicere in fraudem ridentibus undis, 1005
 Improba naucleri ratio cum caeca iacebat.

Tum penuria deinde cibi languentia leto
 Membra dabat, contra nunc rerum copia mersat.
 Illi imprudentes ipsi sibi saepe venenum
 Vergebant, medici nunc dant sollertius usi. 1010

Inde casas postquam ac pelles ignemque pararunt,
 Et mulier coniuncta viro concessit in unum
Hospitium, ac lecti socialia iura duobus
 Cognita sunt, prolemque ex se videre creatam,
 Tum genus humanum primum mollescere coepit.
 Ignis enim curavit ut alsia corpora frigus 1015

(Non ita iam) possent caeli sub tegmine ferre,
 Et Venus inminuit vires puerique parentum
 Blanditiis facile ingenium fregere superbum.
 Tunc et amicitiam coeperunt iungere aventes
 Finitimi inter se nec laedere nec violari, 1020
 Et pueros commendarunt muliebrique saeculum,
 Vocibus et gestu cum balbe significarent
 Imbecillorum esse aequum misererier omnes.
 Nec tamen omnimodis poterat concordia gigni,
 Sed bona magnaue pars servabat foedera caste; 1025
 Aut genus humanum iam tum foret omne peremptum
 Nec potuisset adhuc perducere saecula propago.
 At varios linguae sonitus natura subegit
 Mittere et utilitas expressit nomina rerum,
 Non alia longe ratione atque ipsa videtur 1030
 Protrahere ad gestum pueros infantia-linguae,
 Cum facit ut digito quae sint praesentia monstrent.
 Sentit enim vim quisque suam quoad possit abuti.
 Cornua nata prius vitulo quam frontibus extent,
 Illis iratus petit atque infestus inurget. 1035
 At catuli pantherarum scymnique leonum
 Unguibus ac pedibus iam tum morsuque repugnant,
 Vix etiam cum sunt dentes unguisque creati.
 Alituum porro genus alis omne videmus
 Fidere et a pinnis tremulum petere auxiliatum. 1040
 Proinde putare aliquem tum nomina distribuisse
 Rebus et inde homines didicisse vocabula prima,
 Desiperest. Nam cur hic posset cuncta notare
 Vocibus et varios sonitus emittere linguae,
 Tempore eodem alii facere id non quisse putentur? 1045
 Praeterea si non alii quoque vocibus usi
 Inter se fuerant, unde insita notities est
 Utilitatis et unde data est huic prima potestas, .

Quid vellet facere ut sciret animoque videret?
 Cogere item plures unus victosque domare 1050
 Non poterat, rerum ut perdiscere nomina vellent.
 Nec ratione docere ulla suadereque surdis,
 Quid sit opus facto, facilest; neque enim paterentur
 Nec ratione ulla sibi ferrent amplius aures
 Vocis (inauditos sonitus) obtundere frustra. 1055
 Postremo quid in hac mirabile tantoperest re, ~~→~~
 Si genus humanum, cui vox et lingua vigeret,
 Pro vario sensu varia res voce notaret?
 Cum pecudes mutae, cum denique saecula ferarum
 Dissimiles soleant voces variasque ciere, 1060
 Cum metus aut dolor est et cum iam gaudia gliscunt.
 Quippe etenim licet id rebus cognoscere apertis.
 Inritata canum cum primum magna Molossum
 Mollia ricta fremunt duros nudantia dentes,
 Longe alio sonitu (rabie restricta) minantur, 1065
 Et cum iam latrant et vocibus omnia complent.
 Et catulos blande cum lingua lambere temptant
 Aut ubi eos iactant pedibus morsuque petentes
 Suspensis teneros imitantur dentibus haustus,
 Longe alio pacto gannitu vocis adulant, 1070
 Et cum deserti baubantur in aedibus aut cum
 Plorantes fugiunt summisso corpore plagas. blows
 Denique non hinnitus item differre videtur,
 Inter equas ubi equus florenti aetate iuventus
 Pinnigeri saeyit calcaribus ictus amoris, 1075
 Et fremitum patulis ubi naribus edit ad arma,
 Et cum |sic alias| concussis artibus hinnit? trembling
 Postremo genus alituum variaequae volucres,
 Accipitres atque ossifragae mergique marinis
 Fluctibus in salso victum vitamque petentes, 1080
 Longe alias alio iaciunt in tempore voces,

Et quom de victu certant praedaeque repugnant.
 Et partim mutant cum tempestatibus una
 Raucisonos cantus, cornicum ut saecla vetusta
 Corvorumque greges ubi aquam dicuntur et imbres 1085
 Poscere et interdum ventos aurasque vocare.
 Ergo si varii sensus animalia cogunt,
 Muta tamen cum sint, varias emittere voces,
 Quanto mortales magis aequumst tum potuisse
 Dissimiles alia atque alia res voce notare! 1090

Illud in his rebus tacitus ne forte requiras,
 Fulmen detulit in terram mortalibus ignem
 Primitus, inde omnis flammaram diditur ardor.
 Multa videmus enim caelestibus inlita flammis *kindled*
 Fulgere, cum caeli donavit plaga vapore. sc. ea. 1095
 Et ramosa tamen cum ventis pulsa vacillans *swaying to*
 Aestuat in ramos incumbens arboris arbor, *leaning*
 Exprimitur validis extritus viribus ignis
 Et micat interdum flammai fervidus ardor,
 Mutua dum inter se rami stirpesque teruntur. *rub* 1100
 Quorum utrumque dedisse potest mortalibus ignem.

Next Inde cibum coquere ac flammae mollire vapore
 Sol docuit, quoniam mitescere multa videbant *become milder*
 Verberibus radiorum atque aestu victa per agros.

note *divine* Inque dies magis hi victum vitamque priorem 1105
 Commutare novis monstrabant (rebu' benigni,) *good, kind.*
 Ingenio qui praestabant et corde vigeabant.

and *all* *appear* *beauty* Condere coeperunt urbes arcemque locare
 Praesidium reges ipsi sibi perfugiumque,
 Et pecus atque agros divisere atque dedere 1110

appear *beauty* Pro facie cuiusque et viribus ingenioque;
 Nam facies multum valuit viresque videntes. *-bant*
 Posterius res inventast aurumque repertum,
 Quod facile et validis et pulchris dempsit honorem;

x rebus et igni

Divitioris enim ^{path} sectam plerumque sequuntur 1115

Quamlibet et fortes et pulchro corpore creti.

Quod si quis vera vitam ratione gubernet,

Divitiae grandes homini sunt vivere parce ^{need, want, lack} penuria parvi. ^{of a lit}

At claros homines voluerunt se atque potentes, 1120

Ut fundamento stabili fortuna maneret

Et placidam possent ^{by wealth} opulentis degere vitam;

Nequiquam, quoniam ad summum succedere honorem ^{vanity}

Certantes iter infestum fecere viai, ^{unsafe, dangerous}

Et tamen e summo, quasi fulmen, deicit ictos 1125

Invidia interdum contemptim in Tartara taetra; ^{hideous}

Invidia quoniam, ceū fulmine, summa vaporant ^{burn}

Plerumque et quae sunt aliis magis edita cumque;

Ut satius multo iam sit parere quietum

Quam regere imperio res velle et regna tenere. 1130

^{afire} Proinde sine incassum ^{sinere, in vain} defessi sanguine ^{abl.} sudent, ^{sweet} ^{sudo - i.} ^{-are.}

Angustum per iter luctantes ambitionis; X

^{red} Quandoquidem sapiunt alieno ex ore petuntque

Res ex auditis potius quam sensibus ipsis,

Nec magis id nunc est neque erit mox quam fuit ante. 1135

Ergo regibus occisis subversa iacebat

^{one} Pristina maiestas soliorum et scepra superba,

Et capitis summi praeclarum insigne cruentum

Sub pedibus vulgi magnum lugebat honorem;

Nam cupide conculcatur nimis ante metutum. 1140

Res itaque ad summam ^{degradatio} faecem turbasque redibat,

Imperium sibi cum ac summatum quisque petebat. ^{supreme}

Inde magistratum partim docuere creare

Iuraque constituere, ut vellent legibus uti.

Nam genus humanum, defessum vi colere ^x aevom, ^{life} 1145

^{ility} Ex inimicitiiis languibat; quo magis ipsum

Sponte sua cecidit sub leges artaque iura. ^{severe}

* defessum colendo.

colere - fig. - live.

Acrius ex ira quod enim se quisque parabat
 Ulcisci quam nunc concessumst legibus aequis,
 Hanc ob rem est homines pertaesum vi colere aevom. 1150

Inde metus maculat poenarum praemia vitae.

Circumretit enim vis atque iniuria quemque

Atque, unde exortast, ad eum plerumque revertit,

Nec facilest placidam ac pacatam degere vitam

Qui violat (factis) communia foedera pacis. 1155

Etsi fallit enim divom genus humanumque,

Perpetuo tamen id fore clam diffidere debet; *disturbant*

(Quippe ubi) se multi per somnia saepe loquentes

Aut morbo delirantes protraxe ferantur

Et celata mala in medium et peccata dedisse. *to have published 1160 ab*

Nunc quae causa deum per magnas numina gentes

Pervulgarit et ararum compleverit urbes

Suscipiendaque curarit sollemnia sacra,

Quae nunc in magnis florent sacra rebu' locisque,

Unde etiam nunc est mortalibus insitus horror 1165

Qui delubra deum nova toto suscitatur orbi

Terrarum et festis cogit celebrare diebus,

Non ita difficilest rationem reddere verbis.

Quippe etenim iam tum divum mortalia saecula

Egregias animo facies vigilante videbant 1170

Et magis in somnis mirando corporis auctu.

His igitur sensum tribuebant propterea quod

Membra movere videbantur vocesque superbas

Mittere pro facie praeclara et viribus amplis. *befitting*

Aeternamque dabant vitam, quia semper eorum 1175

Suppeditabatur facies et forma manebat,

Et tamen omnino quod tantis viribus auctos *on general you*

Non temere ulla vi convinci posse putabant.

Fortunisque ideo longe praestare putabant,

Quod mortis timor haud quemquam vexaret eorum, 1180

Et simul in somnis quia multa et mira videbant
Efficere et nullum capere ipsos inde laborem.

Praeterea caeli rationes (ordine certo) *in fixed order*

Et varia annorum cernebant tempora verti

Nec poterant quibus id fieret cognoscere causis. 1185

Ergo per fugium sibi habebant omnia divis

el Tradere et illorum nutu facere omnia flecti.

In caeloque deum sedes et templa locarunt, *quarters*

Per caelum volvi quia nox et luna videtur,

Luna dies et nox et noctis signa severa 1190

Noctivagaeque faces caeli flammaeque volantes, *walkers*

Nubila sol imbres nix venti fulmina grando *hail*

Et rapidi fremitus et murmura magna minarum.

O genus infelix humanum, talia divis

Cum tribuit facta atque iras adiunxit acerbas! 1195

Quantos tum gemitus ipsi sibi, quantaque nobis

Volnera, quas lacrimas peperere minoribu' nostris!

Nec pietas ullast/~~velatum~~ saepe videri *with his head covered*

Vertier ad lapidem atque omnes accedere ad aras

Nec procumbere humi prostratum et pandere palmas 1200

Ante deum delubra nec aras sanguine multo

Spargere quadrupedum nec votis nectere vota, *bind*

Sed mage pacata posse omnia mente tueri.

Nam cum suspicimus magni caelestia mundi

Templa, super stellisque micantibus aethera fixum, *Nam. Sing. a. Gk. acc.* 1205

Et venit in mentem solis lunaeque viarum,

ending on Tunc aliis oppressa malis in pectora cura *subject*

note Illa quoque expergefatum caput erigere infit, *expergefacio wake*

Da Nequae forte deum nobis imensa potestas

Sit, vario motu quae candida sidera verset. x 1210

Temptat enim dubiam mentem rationis egestas,

Ecquaenam fuerit mundi genitalis origo,

Et simul ecquae sit finis, quoad moenia mundi

x ac. "person".

Solliciti motus hunc possint ferre laborem,

An divinitus aeterna donata salute

1215

Perpetuo possint aevi labentia tractu

Imnensi validas aevi contemnere vires. X

Praeterea cui non animus formidine divum

Contrahitur, cui non correpunt membra pavore,

Fulminis horribili cum plaga torrida tellus

Contremittit et magnum percurrunt murmura caelum?

Non populi gentesque tremunt, regesque superbi

Corripiunt divum percussi membra timore,

Nequid ob admissum foede dictumve superbe

Poenarum grave sit solvendi tempus adultum?

Summa etiam cum vis violenti per mare venti

Induperatorem classis super aequora verit

Cum validis pariter legionibus atque elephantis,

Non divum pacem votis adit ac prece quaesit

Ventorum pavidus paces animasque secundas?

Nequiquam, quoniam violento turbine saepe

Correptus nilo fertur minus ad vada leti.

Usque adeo res humanas vis abdita quaedam

Obterit et pulchros fasces saevasque secures

Proculcare ac ludibrio sibi habere videtur.

Denique sub pedibus tellus cum tota vacillat

Concussaeque cadunt urbes dubiaeque minantur,

Quid mirum si se temnunt mortalia saecula

Atque potestates magnas mirasque relinquunt

In rebus vires divum, quae cuncta gubernent?

Quod superest, aes atque aurum ferrumque repertumst

Et simul argenti pondus plumbique potestas,

Ignis ubi ingentes silvas ardore cremarat

Montibus in magnis, seu caeli fulmine misso,

Sive quod inter se bellum silvestre gerentes

Hostibus intulerant ignem formidinis ergo,

Quia causa

1245

because
causa

Sive quod inducti terrae bonitate volebant
 Pandere agros pingues et pascua reddere rura, *fat.*
 Sive feras interficere et ditescere praeda. *grow rich*
 Nam fovea atque igni prius est venarier ortum *1250*
 Quam saepire plagis saltum canibusque ciere. *novel, paul into*
 Quidquid id est, quacumque e causa flammeus ardor *sc. anima*
 Horribili sonitu silvas exederat altis *devour, consume*
 Ab radicibus et terram percoxerat igni, *scorch*
 Manabat (venis ferventibus) in loca terrae *1255*
 Concava conveniens argenti rivus et auri, *valley of peace*
 Aeris item et plumbi. Quae cum concreta videbant *where*
 Posterius claro in terra splendere colore,
 Tollebant nitido capti levique lepore, *smooth*
 Et simili formata videbant esse figura *shape* *1260*
 Atque lacunarum fuerant vestigia cuique. *outlines*
 Tum penetrabat eos posse haec liquefacta calore
 Quamlibet in formam et faciem decurrere rerum *run down*
 Et prorsum quamvis in acuta ac tenuia posse *thin, fine*
 Mucronum duci fastigia procudendo, *by hammering out* *1265*
 Ut sibi tela darent, silvasque ut caedere possent
 Materiemque dolare et levia radere tigna *smooth off, beat*
 Et terebrare etiam ac pertundere perque forare. *piece*
 Nec minus argento facere haec auroque parabant *drill*
 Quam validi primum violentis viribus aeris; *1270*
 Nequiquam, quoniam cedebat victa potestas
 Nec poterat pariter durum sufferre laborem.
 Tum fuit in pretio magis aes aurumque iacebat
 Propter inutilitatem hebeti mucrone retusum. *blunted*
 Nunc iacet aes, aurum in summum successit honorem. *1275*
 Sic volvenda aetas commutat tempora rerum. *seasons of things*
 Quod fuit in pretio, fit nullo denique honore;
 Porro aliud succedit et e contemptibus exit
 Inque dies magis adpetitur floretque repertum

Laudibus et miro est mortales inter honore. X 1280

Nunc tibi quo pacto ferri natura reperta

Sit facilest ipsi per te cognoscere, Memmi.

Arma antiqua manus ungues dentesque fuerunt

Et lapides et item silvarum fragmina rami,

Et flamma atque ignes, postquam sunt cognita primum. 1285

Posterius ferri vis est aerisque reperta.

Et prior aeris erat quam ferri cognitus usus,

Quo facilis magis est natura et copia maior.

Aere solum terrae tractabant, aereque belli

Miscebant fluctus et vulnera vasta serebant 1290

Et pecus atque agros adimebant; nam facile ollis = illis

Omnia cedebant armatis nuda et inerma.

Inde minutatim processit ferreus ensis

Versaque in opprobrium species est falcis aenae, bronze

Et ferro coepere solum proscindere terrae plough 1295

Exaequataque sunt creperi certamina belli.

Et prius est armatum in equi conscendere costas side

Et moderarier hunc frenis dextraque vigere

Quam biuigo curru belli temptare pericla.

Et biugos prius est quam bis coniungere binos sc. equos 1300

Et quam falciferos armatum escendere currus.

Inde boves Lucas turrato corpore, taetas,

Anguifmanus, belli docuerunt volnera Poeni

Sufferre et magnas Martis turbare cateryas.

Sic alid ex alio peperit discordia tristis, 1305

Horribile humanis quod gentibus esset in armis,

Inque dies belli terroribus addidit augmen.

Temptarunt etiam tauros in munere belli

Expertique sues saevos sunt mittere in hostes.

Et validos partim prae se misere leones

1310

Cum doctoribus armatis (saevisque magistris)

Qui moderarier his possent vinclisque tenere;

Nequiquam, quoniam permixta caede calentes
 Turbabant saevi nullo discrimine turmas,
 Terrificas capitum quatientes undique cristas,
 Nec poterant equites fremitu perterrita equorum

1315

St. Bonnam

Pectora mulcere et frenis convertere in hostes.
 Inritata leae iaciebant corpora saltu

Undique et adversum venientibus ora petebant
 Et (nec opinantes) a tergo deripiebant

1320

Deplexaeque dabant in terram vulnere victos,
 Morsibus adfixae validis atque (unguibus uncis.)

Tactabantque suos tauri, pedibusque terebant

Et latera ac ventres hauribant subter equorum

gob. 20.

Cornibus et terram minitanti fronte ruebant.

1325

Et validis socios caedebant dentibus apri

Tela infracta suo tinguentes sanguine saevi,

net -

In se fracta suo tinguentes sanguine tela,

Permixtasque dabant equitum peditumque ruinas.

Nam transversa feros exhibant dentis adactus

1330

Iumenta aut pedibus ventos erecta petebant;

Nequiquam, quoniam ab nervis succisa videres

Concidere atque gravi terram consternere casu.

Siquos ante domi domitos satis esse putabant,

Effervescere cernebant in rebus agundis

1335

Volneribus clamore fuga terrore tumultu, causal ell. 's

Nec poterant ullam partem reducere eorum;

Diffugiebat enim varium genus omne ferarum;

Ut nunc saepe boves Lucae ferro male mactae

Diffugiunt, fera facta suis cum multa dedere.

1340

Sed facere id non tam vincendi spe voluerunt,

1347

Quam dare quod gemerent hostes, ipsique perire,

Qui numero diffidebant armisque vacabant.

Nexilis ante fuit vestis quam textile tegmen.

1350

Textile post ferrumst, quia ferro tela paratur,

loom

F. S. in
am

Nec ratione alia possunt tam levia gigni

readles Insilia ac fusi, radii scapique sonantes. *spindles, shuttles, yarn-bea*

Et facere ante viros lanam natura coegit

Quam muliebre genus; nam longe praestat in arte 1355

ilful Et sollertius est multo genus omne virile;

Agricolae donec vitio vertere severi, *fault — turn*

Ut muliebribus id manibus concedere vellent

Atque ipsi pariter durum sufferre laborem

Atque opere in duro durarent membra manusque. 1360

pattern At specimen sationis et insitionis origo *grafting*

Ipsa fuit rerum primum natura creatrix,

series Arboribus quoniam bacae glandesque caducae *fallen*

fairly Tempestiva dabant pullorum examina subter; *swarms*

pleasid Unde etiam libitumst stirpes *shoot* committere ramis 1365

swan Et nova defodere in terram virgulta per agros.

Inde aliam atque aliam culturam dulcis agelli *the plot to*

Temptabant (fructusque feros) mansuescere terram *tame*

Cernebant indulgendo blandeque colendo. *soothing*

Inque dies magis in montem succedere silvas 1370

Cogebant infraque locum concedere cultis,

cadaver Prata lacus rivos segetes *crops* vinetaque laeta

Collibus et campis ut haberent, atque olearum

ark - *blow* Caerula *separate* distinguens inter *region* plaga currere posset

Per tumulos et convalles camposque profusa; 1375

Ut nunc esse vides vario *marked* distincta lepore

uit - *tree* Omnia, quae pomis intersita dulcibus ornant *set lettuce*

Arbustisque tenent felicibus obsita circum. *fruitful*

At liquidas avium voces imitaries ore

Ante fuit multo quam levia carmina cantu 1380

active *quest* Concelebrare homines possent auresque iuvare. *with pleas*

Et zephyri, cava per calamorum, sibila primum *the e*

fanus Agrestes docuere cavas inflare cicutas. *hemlock-stalks*

Inde minutatim dulces didicere querellas, *plaint*

1368 — . . . mansuescere terra — abl. of place.

LIBER QUINTUS.

Tibia quas ^{pour out} fundit ^{knocked?} digitis pulsata canentum, ^{of the players} 1385

Avia per ^{grove} nemora ac silvas ^{woodland} saltusque reperta, ^{met with}

Per loca pastorum deserta atque otia dia. ^{peaceful places}

Haec animos ^{in groups} ollis mulcebant atque iuvabant ^{because the of} 1390

Cum satiare cibi; nam tum haec sunt omnia cordi. ^{are dead}

Saepe itaque inter se prostrati in gramine molli

Propter aquae rivum sub ramis arboris altae

Non magnis opibus ^{pleasant} lucunde corpora habebant,

Praesertim cum ^{weather} tempestas ridebat et anni 1395

Tempora pingebant viridantes floribus herbas.

Tum ioca, tum sermo, tum dulces esse cachinni ^{laughter}

Consuerant. Agrestis enim tum musa vigebat;

Tum caput atque umeros plexis redimire coronis ^{redimio}

Floribus et foliis (lascivia laeta) monebat, ^{unreach}

Atque extra ^{out of step} numerum ^{advance} procedere membra moventes 1400

Duriter et duro terram pede pellere matrem;

Unde oriebantur risus dulcesque cachinni,

Omnia quod nova tum magis haec et mira vigebant.

Et vigilantibus hinc aderant solacia somni, ^{consolation for} 1405

Ducere multimodis voces et flectere cantus ^{the want of sleep}

Et supra calamos unco percurrere labro; ^{lip}

Unde etiam vigiles nunc haec accepta tuentur

Et numerum servare ^{revere} recens didicere, neque hilo

Maiorem interea capiunt dulcedini? fructum ^{enjoyment} 1410

Quam silvestre genus capiebat terrigenarum. ^{of delight}

Nam quod adest praesto, nisi quid cognovimus ante ^{earth-born}

Suavius, in primis placet et pollere videtur, ^{eye}

Posteriorque fere melior res illa reperta

Perdit et immutat ^{our feelings in regard to} sensus ad pristina quaeque. X 1415

Sic odium coepit glandis, sic illa relicta

Strata cubilia sunt herbis et frondibus aucta. ✓

Pellis item cecidit vestis contempta ferinae;

^{into contempt}

Quam reor invidia tali tunc esse repertam,
Ut letum insidiis qui gessit primus obiret, 1420

Et tamen inter eos distractam sanguine multo
Disperiisse neque in fructum convertere quisse.

Tunc igitur pelles, nunc aurum et purpura curis
Exercent hominum vitam belloque fatigant;

ref
nd in the
Quo magis in nobis, ut opinor, culpa resedit. 1425

Frigus enim nudos sine pellibus excruciabat
Terrigenas; at nos nil laedit veste carere

Purpurea atque auro signisque ingentibus apta, *signis
Cervicibus
in gola*
Dum plebeia tamen sit quae defendere possit. *nos*

*provided
that*
Ergo hominum genus incassum frustra que laborat 1430

Semper et in curis consumit inanibus aevum,

Nimirum quia non cognovit quae sit habendi *the right
of possn*

Finis et omnino quoad crescat vera voluptas. *In general*

Bar
Idque minutatim vitam provexit in altum *into the deep sea*

Et belli magnos commovit funditus aestus. *billow* 1435

At vigiles mundi magnum ac versatile templum *revolving*

Sol et luna suo lustrantes lumine circum *wander*

Perdocuere homines annorum tempora verti

system
Et certa ratione geri rem atque ordine certo.

Iam validis saepti degebant turribus aevum 1440

Et divisa colebatur discreta que tellus, *divide*

oil-winged
Iam mare velivolis florebat puppibus; *ships* urbes

Auxilia ac socios iam (pacto foedere) habebant,

Carminibus cum res gestas coepere poetae *the dead of the
letters of*

Tradere; nec multo priu' sunt elementa reperta. 1445 *self*

Propterea quid sit prius actum respicere aetas

Nostra nequit, nisi (qua) (ratio) vestigia monstrat. *recovery*

Navigia atque agri culturas moenia leges

Arma vias vestes et cetera de genere horum,

Praemia, delicias quoque vitae funditus omnes, 1450

*without
exception*

LIBER QUINTUS.

Carmina picturas, et daedala signa polire,

Usus et impigrae simul experientia mentis

Paulatim docuit pedetemptim progredientes.

Sic unumquicquid paulatim protrahit aetas

In medium ratioque in luminis erigit oras.

Namque alid ex alio clarescere et ordine debet

Artibus, ad summum donec venere cacumen.

1455

de oba 45
wel - sion
el alid

pe abe

NOTES.

NOTES.

1—54. *No one can worthily praise Epicurus, the founder of this philosophy. The benefits he conferred on men are greater than those conferred by gods, such as Ceres and Bacchus, or by demigods, such as Hercules; because peace of mind is more important than external comfort or safety.*

1. *potis* is an indeclinable adj.; *quid potis est*, l. 560; *pote*, which also occurs, is not the neuter, but a weakened form, as *magis* is of *magis*, *amabere* of *amaberis*.

dignum...pro: the simple abl. is more usual after *dignus*; but comp. Hor. Ep. i 7 24 *dignum pro laude*.

pectore, 'genius'; again in l. 5 *pectus* is the seat of intellect, in ll. 18 and 43 that of moral qualities.

2. *repertis*, 'discoveries'; often used as a noun by Lucr.

4. *eius*, i.e. *Epicuri*; see Introduction p. xiv; Lucr. reverences his master so much that he generally avoids mentioning his name; it only occurs once in the whole poem, iii 1042.

possit: consec. subj., as *qui=ut is*.

5. *quaesita*, 'acquired' rather than 'sought'; see l. 213.

praemia, 'prizes', 'valuable things'. *liquit*, 'bequeathed'.

6. *cretus* is the perf. partic. of *cresco*, used as if *cresco* were deponent; comp. *adultus* from *adolesco*. Similar phrases occur in ll. 60, 1116; also in Ovid and Virgil.

7. *si, ut ipsa*: *si* is not elided (this is called *hiatus*) and the syllable is shortened; so l. 74 *quæ in orbi*. This hiatus is very common in Plautus and Terence and is even found in Horace (*si mē amas inquit*) and Virgil (*tē amice nequior*). *petit* is intransitive.

8. Virg. Ecl. v 64 *deus, deus ille, Menalca*.

Memmi: Gaius Memmius, a Roman aristocrat to whom the whole poem of Lucr. is addressed. It seems probable that he was unworthy

of such an honour: Catullus, who was a member of his staff, when he was propraetor in Bithynia, always speaks of him with contempt and dislike. His name occurs five times in this book.

9. *princeps* = *primus*; again, i 94.

rationem, 'plan': a word often used by Lucr., and with different meanings, such as 'reason', 'reasoning', 'system', 'law', 'opinion'.

10. *sapientia*, 'wisdom' or 'philosophy'. Lucr. will not allow this name to any system previous to that of Epicurus.

12. *tranquillo*: neut. adj. used as noun. Human life is compared to a ship at sea. Notice the alliteration in this beautiful line.

13. *enim* is argumentative, 'if you doubt it', used like *ἐπεὶ* with imperative, for which see Aristoph. Wasps 73, 519, Soph. El. 352.

divina...antiqua: such double epithets without copula are constantly used by Lucr.: e.g. l. 24 *Nemeaeus magnus*.

14. *namque*, 'for instance'. Ceres corresponds to the Greek Demeter, Liber to Bacchus.

15. *instituisse*, 'to have revealed'; *κατέδειξε* has the same meaning. Though the Augustan poets generally end a hexameter with a word of two or three syllables, Lucr. often has words of one, four, and five in this position.

18. *poterat* is impersonal. *bene vivi*, 'happiness'; in prose, *beata vita*; comp. Hor. Ep. i 11 28 *navibus atque quadrigis petimus bene vivere*. *puro pectore*: comp. our phrase, 'to make a clean breast of it'.

19. *merito* goes with *videtur*.

20. *ex quo* = *ex quo orta*.

magnas: conventional epithet of *gentes*; again l. 1161.

21. *vitae*: possessive gen.

22. Hercules was the ancient type of strength and valour and won a place in heaven by these qualities.

antistare, sc. *factis Epicuri*: Catullus (ix 3) speaks of a friend as *antistans mihi milibus trecentis* 'worth more than 300,000 others'. The word is rare in later writers.

23. *ratione*, 'opinion'.

24. *Nemeaeus*: constr. as if it were *Nemeaei* agreeing with *leonis*, and comp. Virgil's *Tyrrhenusque tubae clangor*. The argument is: even if Hercules had not killed all these wild beasts, we should not be worse off now. Eight of the twelve labours of Hercules are here mentioned.

25. *obesset*: the protasis, *si viveret*, is understood.

26. *denique*, 'besides' rather than 'lastly', as often in Lucr.

27. *posset* = *valeret*.

28. Geryon was the three-headed king of Hesperia whom Hercules conquered; Martial (v 65 11) calls him *pastor Hiberus*.

The line in italics was written by Munro to fill the place of a lost line of the original.

volucres are the Harpies which ate human flesh and used their brazen feathers as arrows, as it was once believed that the porcupine used its quills. They lived near lake Stymphālus in Arcadia and are therefore sometimes called Stymphalides.

29. *tanto opere*, 'so much', is usually written as one word; see l. 1056.

30. Virg. Georg. ii 140 *tauri spirantes naribus ignem*.

31. *Thracis*: epithet of Diomedes king of Thrace, to distinguish him from his namesake, the son of Tydeus who fought against Troy. Ismara, or Ismarus, is a mountain on the coast of Thrace; the Bistōnes were a Thracian people, and the Roman poets often use their name as =Thracian.

propter with this meaning often comes after the word it governs; see ll. 623, 738; but, ll. 35, 1393, it comes before it.

32. *aurea...fulgentia*: see n. to l. 13.

The Hesperides were fabulous women who guarded the golden apples somewhere in the west; hence their name.

33. *acerba*: adverbial use of adj. common in all Latin poets; Virg. Aen. ix 794 *asper, acerba tuens*; the sing. adj. is commoner than the plur.

34. *quid denique*, 'what possible harm', like *quid tandem* in l. 38; comp. Hor. Sat. i 4 80 *quis denique?*

35. *Atlanteum*: in these western parts the giant Atlas was believed to stand, supporting the burden of the sky on his shoulders.

pelage: Greek form of plural; so Lucr. also uses *mele*, 'songs'.

36. *noster* would be *nostras, -atis*, in prose. *barbarus* is used by Lucr. as = *peregrinus*, but by Plautus, translating from Greek originals, as = *Romanus*; so, Mostell. 628, *pultifagus barbarus* is 'a porridge-eating Roman', *puls* being the old national food.

37. *cetera de genere hoc* is found in Horace, Sat. i 1 13.

38. *viva* contains a second protasis, *si viverent*.

39. *ita*, 'for', qualifies the whole sentence, as very often in Plautus. *satiatem* is used because *satiatatem* cannot be got into the verse.

40. *scatit*: from *scatēre*, a less common form than *scatere*; so Lucr

uses *fervere* and *fulgere*. It here takes a gen., instead of the usual abl., as if *scatit* were = *plena est*.

terrore: in this sense Martial twice calls the Nemean lion *terror Nemees*.

42. *est nostra potestas*: lit. 'there is power belonging to us', i.e. 'we have the power'.

43. *purgatumst*: the enclitic *est* is common in Lucr. and earlier writers; so *tumst* just below.

quae proelia etc.: 'what battles and dangers must then find their way into us'. Here, as often, Lucr. uses the active gerund instead of the passive gerundive; for *insinuare* is here an active verb. Comp. *iiii aeternas quoniam poenas in morte timendumst*; this construction was dropped by later writers, though it was always kept in Greek, *ὠφελητέον τὴν πόλιν* being as good as *ὠφελητέα ἡ πόλις*.

44. *ingratis* is contracted from *ingratiis* and used adverbially.

45. *cupidinis* = *cupiditatis*; an archaic word.

47. *superbiâ spurcitia*: the *a* is left short before *sp*; see l. 79; the Augustan poets avoid placing a short vowel before *sp*, *sc*, *st*.

spurcitia, 'impurity'; *petulantia*, 'brutal violence'.

48. *desidiae*, 'different forms of sloth'.

49. *subegerit* is perf. subj., *qui* being = *cum is*; comp. *cum suerit* just below.

51. *dignarier*, the archaic form of *dignari*, is here passive, and followed by the inf. *esse*.

53. *immortalibu'*: in pre-Augustan poets the final *s* is often ignored in short syllables. *suerit* is contracted from *sueverit*. Epicurus wrote a book *περὶ θεῶν*.

54. The 'nature of things' is here what we call 'natural science'; it can have a wider meaning; see l. 199.

55—90. *Following Epicurus I point out the absolute reign of law in the natural world; and, as I have already proved that the mind of man is mortal, so I will now prove that the world too must some day come to an end. I will also describe the birth-time of the world, and above all the motions of the heavenly bodies, as it is mainly owing to our ignorance of these that superstition has so strong a hold upon us.*

55—75. This long sentence may be split up into three, in translating, of four, five, and twelve lines. In this case *dum* must not be translated.

55. *rationes*, 'reasonings'.

56. The order is: *doceo quam sit necessum quaeque durare in eo foedere quo creata sint*.

57. *durare*, 'to remain'; but, l. 1360, 'to harden'.

58. *nec*, i.e. *quamque non*, still after *doceo*.

59. *quo genere* etc.: 'herein it has been found above all that the nature of the mind'. *in primis...primum* is very emphatic. In *Lucr. animus* always is the mind or reason (*λόγος*), *anima* the soul or life (*ψυχή*). He is referring to his third book where he has proved this point at great length. See *Introduct.* p. xxiii. *animi natura* is merely a periphrasis for *animus*, like *mundi natura* for *mundus*; both occur frequently; see ll. 127, 132, 157, 239, 331, 365, 370, 834.

60. *nativo*, 'that had birth'. *Lucr.* uses *nativus* as = *mortalis* and opposed to *aeternus*; so *γεννητός* is often opposed to *ἀίδιος*.

corpore creta: see n. to *cretus*, l. 6.

62. *solere*: the acc. and inf. as if *reperta* in l. 59 were *repertum*.

He means to say that appearances of dead men in our dreams are mere delusions and do nothing to prove the immortality of the soul.

63. *videamur*: the subj. here and in l. 681 seems to denote frequency, though regularly *quoties hoc fit* = ὅταν τοῦτο γλγνηται; probably the subj. is due to the semblance of *oratio obliqua*.

64. *quod superest*, lit. 'as to what remains', i.e. 'to continue'; a common formula of transition.

rationis, 'of my plan'. *detulit*, sc. *me*.

67. *congressus materiai*, 'union of matter', formed by the ceaseless strife and collision of atoms described in the second book.

68. *fundarit*: indirect question after *ratio reddunda sit*; so also *extiterint, sint natae, coeperit, insinuarit* below.

69. *lunai*: *Lucr.* uses this archaic form and that in *-ae* (see l. 76) indifferently as suits his verse. *tellure*, 'from the earth'.

animantes = *animalia*: see n. to l. 823.

70. Part of his plan is to disprove the existence of such fabulous creatures as Centaurs and Chimeras; see ll. 878 foll.

71. *quove*: *ve* is for *que*, as the origin of speech is not an alternative but an additional topic: also l. 776. *Munro* thinks this licence may be due to the ambiguity of *quōque* which might be a part of *quisque*.

72. *vesci* = *uti*: rather different in l. 857. *per*, 'in', 'in the way of'; so *per iocum*.

73. *ille* is often used by Lucr. to express vividly admiration or, as here, contempt.

divom metus, *δεισιδαιμονία*, is the main cause of human misery, according to Lucr.; and to banish it is the sole aim of the study of nature.

insinuarit is here intrans., though not in l. 44; the *in* of the verb governs *pectora*.

74. *quī in*: for the hiatus see n. to l. 7. *orbi* is the archaic abl.; again, l. 707. Lucr. uses also *igni*, *luci*, *parti*, *labi*, in this book. *sancta* and *tuetur* are to be taken together.

75. *lacus* are often coupled with *luci* as holy places.

77. *natura gubernans*, 'piloting nature'; another metaphor from a ship. Comp. l. 107, from which it appears that *natura* and *fortuna* are identical.

79. *liberā*: see n. to l. 47. *cursus*: internal acc. after *lustrare*.

80. *morigera*, 'obliging enough'; sarcastic. *animantes*: see n. to l. 823.

81. *ratione*, 'forethought', *προβολή*.

82. *qui*, 'even those who'. Part of the l. is quoted by Horace, Sat. i 5 101 *deos didici securum agere ævum*.

83. *interea*, 'notwithstanding'; again l. 394. Lucr. often uses *eodem tempore* in the same sense: see ll. 756, 765. *ratione* = *modo*.

85. *aetheriis in oris*, 'in the regions of æther'. In Lucr. *aether* is always the higher, unclouded sky, *aer* the lower abode of storms and clouds: see ll. 500—504. *orae luminis*, 'the regions of light', i.e. the world, is a favourite phrase of Lucr.

87. *dominos acres*, i.e. the gods; they are called *domini superbi*, ii 1091.

89. *finita* etc.: 'in short on what principle each thing has its power defined and its deep-set boundary mark'. With *terminus*, sc. *finitus sit*. The metaphor is from a land-mark dividing two properties; here the *terminus* divides for each thing the possible from the impossible.

90. *sit* belongs to *finita* above; Lucr. likes to keep separate the parts of these compound tenses; see ll. 177, 546, 583, 858, 1225, 1416.

91—109. *To proceed to the demonstration I have promised, it is certain, however astonishing it may sound, that the whole world will one day be destroyed. You yourself may live to see it.*

91. *quod superest*: see n. to l. 64. *plura*: adverbial use of adjective; so *acerba* l. 33.

93. *Memmi*: see n. to l. 8. Here the personal appeal invites special attention.

94. *species* = εἶδη, 'things so unlike in appearance'; l. 569, *species* = 'our sight'.

95. Ovid (Am. i 15 23) quotes from this line to pay a fine compliment to its author:

*carmina sublimis tunc sunt peritura Lucreti,
exitio terras cum dabit una dies.*

96. *ruet*, 'will go to ruin'; *ruere* is also transitive sometimes in Lucr., e.g. l. 1325.

moles et machina, 'mass and fabric'; *moles* suggests size, *machina* complexity.

97. *animi*, 'in my mind', a locative like *humi*, *ruri*, *domi*; common also with adjectives like *dubius*, *aeger*. *fallit* is impersonal.

res nova miraque: constr. as if it were *novum mirumque*; *exitium futurum* is the subject to *accidat*.

99. *id* is object to *pervincere*.

100. *fit* = *solet fieri*. *ubi rem adportes* = *ubi res adportatur*; but the Latin idiom requires the subj. in the second person, e.g. *bonus segnior fit ubi negligas* (Sallust). We say 'when one brings'. *ante* is an adverb and goes with *insolitam*.

101. *visu* is contracted from *visui*.

102. *indu* and *endo* are archaic forms of the prep. *in*; the *d* survives in *indigeo*, compound of *egeo*. Lucr. uses *indugredi*, *indupedire*, *induperator*, the last for metrical reasons, though the verbs can be separated by *tnesis* from their prepositions, e.g. *inque pedire*.

via qua etc.: 'where a beaten path of conviction leads most directly'. The meaning is: anything which appeals to sight or touch is readily believed; just so Horace, A. P. 180 *segnius inritant animos demissa per aurem, quam quae sunt oculis subiecta fidelibus*; Tennyson, Enoch Arden, 'things seen are mightier than things heard'.

103. *templa mentis*, 'quarters of the mind'; so Lucr., iv 624, speaks of the mouth as *linguae templa*, Plautus, Mil. Glor. 412, of the sea as *Neptunia templa*, *templa* being = *loca* in old Latin.

104. *dabit fidem*: in prose *faciet fidem*.

106. *in*, 'in the course of'.

107. Comp. l. 77.

108. *ratio*, 'reasoning'; *res*, 'the reality'.

109. *succidere...victa*: translate by two co-ordinate verbs. *fragor* is defined by Seneca (Nat. Quaest. ii 27 3) as a sound *subitus et vehemens*.

110—234. The editors point out that these lines interrupt the argument, which is to prove the precarious existence of the world, and are out of place here. There are many such passages, especially in the last two books; they are rough drafts which Lucr. did not live long enough to fit properly into his text. A number of the verses are copied from his earlier books.

110—145. *You must not think it profane to deny the divinity and permanence of the external world. The mind cannot exist outside the body; indeed it can exist only in one special part of the body itself. Therefore earth, fire, water, and air cannot have life and consequently are not divine.*

110. *qua prius adgrediar quam de re=sed prius quam adgrediar de hac re. fata*, 'decrees of fate'.

114. *ne—rearis*: *ne* with the 2nd pers. of the pres. subj. makes a final clause, not a prohibition, always in Lucr. and generally in writers of the best period; in Greek the same rule is invariable. But Horace at least once (Sat. ii 3 88) and very early and late poets (e.g. Plautus and Martial) use *ne facias* as=*ne feceris* or *noli facere*.

116. *corpore divino*: abl. of description.

117. *putes*: subj. after *ne* l. 114. *Gigantum*: they were punished for their impious attack on heaven by being struck by thunderbolts or imprisoned under mountains; Hor. Od. iii 4 73 *iniecta monstris Terra dolet suis*.

119. *disturbent moenia mundi*, 'displace the walls of the world', i.e. by saying it must perish. *disturbent* and *velint* below are subj., because they are in dependent clauses of *oratio obliqua*.

121. *notantes*, 'blaming'; used technically of the censors.

122. *quae* refers back to l. 116, the last 5 ll. being parenthetical, and includes the things enumerated in l. 115. The MSS. have *distent* here and *videri*, not *videntur*, below; this construction is so harsh that I have admitted the conjecture of Madvig.

123. The order is: *et videntur indigna quae sint*. With *indigna*, sc. *usque adeo* again.

124. *notitiam*, 'a notable instance'. *putentur=putari possint*.

125. *quid sit*=*quale sit illud quod est*.
126. *quippe etenim* recurs ll. 240, 449, 1062, 1169; the expression is pleonastic, as both *quippe* and *etenim* mean 'for'.
non est ut putetur=*non potest putari. esse*, 'to exist'.
127. *consilium*, 'judgment'; *animi* goes with *consil.* as well as with *natura*; for *animi natura* see n. to l. 59.
131. *quicquid*=*quidque*, as often in Lucr.: see ll. 264, 284, 304.
133. *longiter*: so *uniter* l. 537, *duriter* l. 1402.
134. *quod si*, 'but if': *quod* is the conjunction, not the relative, and is thus used also before *nisi*, *contra*, *quoniam* (l. 138).
posset enim multo prius, 'a much more likely supposition'.
137. *tandem*, 'after all'; a rare meaning; Plaut. Mil. Glor. 1053
nimis vilest tandem, 'after all it is very cheap'. *atque*, 'that is'.
138. *quod*: see n. to l. 134. *constat*=*est*; again, l. 144. *quoque*, 'even'.
139. *videtur*, 'is seen'; *videri* often requires, and usually can bear, this meaning in Lucr.
140. *sorsum*: two syllables by *synizesis*.
anima atque animus: see n. to l. 59.
141. *animalem*: fem. adj. agreeing with *formam*.
142. *igni*: see n. to *orbi*, l. 74.
143. As subject to *durare*, sc. *animam atque animum*; Lucr. denies both these to the material elements of the world, differing from the Stoics who maintained that the world had a soul.
aetheris oris: see n. to l. 85.
144. As subject to *constant* (= *sunt*), sc. the things enumerated in l. 115.
145. They have not even life; much less are they divine.
- 146—194. *The gods do not dwell in abodes which we can see: their abodes are, like themselves, too subtle to be perceived by our senses. Nor did the gods create the world for our sakes. They could have no motive for doing so, as their life never admitted of any increase of happiness; nor would they have known how to do so, before nature showed them the way; atoms, of themselves, after countless experiments, fell at last into the positions necessary to make the world as we see it.*
146. *non est ut possis*=*non potes*; comp. l. 126.
147. Epicurus taught that the gods dwelt in *μετακόσμια*, 'spaces

between worlds', the universe (*omne*) being made up of countless worlds such as ours. See *Introduct.* p. xxv.

148. *tenuis*, 'fine', 'subtle', 'impalpable': it is two syllables, the *u* being consonantal. *deum* is gen. plur.

149. *animi mente*, 'the reasoning of the mind'. *videtur* is passive, as often; *θεωρεῖται λόγῳ* is the Greek equivalent of *mente videtur*.

150. *suffūgit*: the perf. should be noticed where the context requires the pres.; *fugio* and its compounds are so used elsewhere, e.g. *Virg. Aen. ii. 12 horret luctuque refugit*.

151. The order is: *debet contingere nil quod nobis tactile sit. sit* because *quod=tale ut. contingere=tangere*.

The nature of the gods can touch nothing we can touch; therefore they do not live in habitations visible to us.

153. *etiam quoque* is pleonastic, like *quippe etenim* l. 126.

154. *de corpore eorum*, 'after the fashion of their bodies'; the full phrase is *de exemplo corporis eorum*.

155. This promise is nowhere fulfilled, one of many signs that the poem is unfinished.

156. *dicere* is the subject to *desiperest*, l. 165. *voluisse, decere* l. 158, *fas esse* l. 160, are all governed by *dicere*. As subject to *voluisse*, sc. *deos*.

157. *mundi naturam*: see n. to *animi natura*, l. 59.

159. *putare* is governed by *decere*.

160. *sit*: subj. of dependent clause in *oratio obliqua*.

ratione: see n. to l. 81.

161. *fundatum perpetuo aevo*, lit. 'founded on unending time', i.e. 'founded to last for ever'; comp. *ossibus fundatum*, l. 927.

163. *ab imo summa* is a compressed phrase for *tota ab imo usque ad summa*.

164. *adfingere et addere* take up again the original subject *dicere*, l. 156, the predicate being *desiperet* below.

166. *largiri*: archaic form of *largiri*, like *dignari* l. 51.

emolumentum is partitive gen. after *quid*; comp. *signi*, l. 918.

167. *adgrediantur*, 'should take in hand', ὥστε ἐπιχειρεῖν; the metaphor both in Greek and English preferring the hand to the foot.

168. *novi*: partitive gen. after *quid*, like *emolumentum* above. *tanto post* goes with *cuperent*, *ante* (= *antea*) with *quietos*.

172. *antēacto*: three syllables by *synizesis*.

174. *credo* shows that the sentence is ironical. *vita*, sc. *deorum*.

175. *genitalis origo*, 'the first birth-time'.

176—180 form a digression. Lucr. has been saying that the gods could gain nothing by the creation of men; he now goes on to say that men could have no quarrel with the gods, if they had never been created.

creatis: the acc. could stand here as well as the dat.; see *creatum*, l. 180.

177. The order of the words is at first sight strange as the metre would allow *debet enim natus quicumque est*; but *natus* gains emphasis thus, and the separation of *natus* and *est* is quite in the manner of Lucr.; see n. to l. 90.

178. *donec*, 'as long as'.

180. *in numero*, sc. *viventium*, 'included among the living'.

obest, sc. *ei*.

181. *gignundis* is archaic for *gignendis*, like *reddunda*, l. 66.

182. *notities* is intended to represent the technical Epicurean term *πρόληψις*, 'preconception' of mankind, i.e. idea of what men were like. See l. 1047 and *Introduct.* p. xxiv. If no men existed, there could be no images (*εἰδωλα*) of them, and consequently no conception (*πρόληψις*) of what they were like.

183. *Comp.* l. 1049. *ut* is consecutive; *facere* goes with *vellent*.

184. *principiorum*: these *principia* (*ἀρχαί*), or *primordia rerum* (*στοιχεῖα*), are the atoms of Epicurus, the ultimate and indivisible elements of all matter; see *Introduct.* p. xxii.

Lucr. uses *principiorum* as the gen. of *primordia*, just as he uses *arbusta* for the plur. of *arbor*, to suit the requirements of his metre: see n. to l. 671.

185. *quidque...possent*: an indirect question, which is in fact a second subject to *cognita est*.

186. *natura*: in the Epicurean philosophy nature and chance are identified; *comp.* l. 77 with l. 107.

187. *ita* is followed by *ut*, l. 192.

188. *plagae* are the blows inflicted by atoms on each other.

189. *concita* goes with *ponderibus*.

190. *omnimodis* (= *omnibus modis*) seems to be formed by false analogy from *multimodis* (= *multis modis*).

191. *congressa*: nom.

193. *deciderunt*, sc. *primordia*. *quoque* goes with *tales* in l. 192. *meatus*, 'courses'.

194. *qualibus=quales sunt ii quibus.*

haec rerum summa, 'this sum of matter', i.e. our world; the *summa summarum*, 'sum of sums' (l. 361), includes all worlds.

novando, 'by constant renewing'; the gerund is used actively to supply oblique cases of the infinitive; see n. to *procedendo* l. 1265. The number of atoms in any world is constant, but their combinations are constantly changing.

195—234. *In any case the world is so far from perfect that it is impossible to attribute to it a divine origin. A great part of it is uninhabitable; the inhabitable part is cultivated with great labour, and often without result. Think too of the wild beasts, the diseases, the early deaths, and of the helpless condition of the human infant compared with the offspring of other animals.*

This paragraph is in the poet's noblest style.

195. *si iam*, 'even if it were the case that'; *si iam* (and *ut iam*) are used with the pres. subj. to state a hypothesis provisionally, for the sake of argument. Here the *iam* suggests that Lucr. is not really ignorant. *εἰ ἄρα* is often used in this sense; Thuc. iii 56 *εἰ ἄρα ἡμάρτηται. quae sint*: indirect question.

196. *rationibus*, 'arrangements'. *ausim*, archaic for *audeam*.

197. *reddere* is short for *rationem reddere*; see l. 66.

198. *divinitus*, *θεοθεν*, 'by the gods'.

199. *stat=constat=est. praedita* is more commonly used of good or neutral qualities. *culpa*, 'faultiness'.

200. *quantum...inde=a tanto quantum.*

impetus, 'whirling expanse'; it seems to denote both size and motion; for the revolution of the sky, see l. 510.

201. *silvae ferarum*: so we speak of 'a den of lions'.

202. *vastae*, 'waste', 'barren', not 'huge'; comp. i 722 *vasta Charybdis*.

204. *inde porro* (*ἔπειτα*), 'next', answers to *principio* (*πρῶτον μὲν*), l. 200; it is different from *inde* in l. 201.

duas partes, *τὰ δύο μέρη*, 'two thirds'.

205. *casus*, 'falling'.

206. *arvi*, 'consisting of land fit to cultivate'.

209. Virg. Georg. ii 237 *validis terram proscinde iuvenis*. In this second Georgic Virgil imitates Lucr. far more than in his other poems. See *Introduct.* p. xvi.

211. *cimus*: from *cire*, *ciēre* being the common form. As object to *cimus* and subject to *nequeant* below, some word like *fruges* must be supplied.

212. *nequeant*: an irregular form of condition, the rule in Latin requiring the same mood, as well as tense, in protasis and apodosis.

213. *et tamen*, 'and after all'; see n. to l. 1096.

quaesita: see n. to l. 5.

217. Note the repetition of *v* and *t*; comp. l. 12.

219. *terra marique*: the local abl. without *in* is found in this phrase even in prose.

220. *anni tempora*: the autumn was particularly dreaded by the Romans as a time of fevers.

222. *tum porro* is pleonastic, either word being sufficient; comp. *inde porro*, l. 204.

proiectus ab undis: the waves are personified; comp. *ab aevo*, l. 306.

223. *humi* is locative; see n. to l. 97. *infans* has here its original meaning of *νήπιος*: comp. *infantia*, l. 1031.

224. *vitali*, 'for life'. *in luminis oras*: see n. to l. 85.

226. *ut aequumst*, sc. *eum facere*.

227. *cui=quod ei* and therefore takes the subj. *tantum malorum* is object to *transire*, and *restet* is impersonal.

228. *variae*, 'of different kinds'.

229. *crepitacillis*: Martial, xiv 54, has this distich on the *crepitacillum*:

*si quis plorator collo tibi vernula pendet,
haec quatiet tenera garrula sinistra manu.*

230. *almae*, 'fostering', the word being derived from *alere*; Lucr. speaks of *alma Venus* in the second line of his poem, and of *liquor almus aquarum*, ii 390.

infracta loquella, 'the broken speech' addressed by nurses to the human baby.

233. *qui=quo*, 'wherewith'; the antecedent is plur. as often; comp. Plaut. Aul. 498 *vehicla qui vehar* 'carriages for me to drive in'; *qui*, not *quo*, is the original abl., as *quis* is plainly of the third declension, not the second.

234. *daedala rerum*, 'cunning in works'. This form of *δαιδάλεος* is used by Lucr. (1) in a passive sense, as an epithet of *tellus*, *carmina*, *signa*, (2) with a genit., as here and in the phrase *verborum daedala lingua*.

235—246. *If the parts of anything are mortal, the whole must be so too. But it is plain that the elements of the world are mortal; therefore the earth and sky must some day perish.*

In sense this follows directly after l. 109, the digression being concluded.

236. *animae*, lit. 'breathings'. *vapores*, 'heats': this is the only meaning of *vapor* in Lucr.

237. *haec rerum summa*: see n. to l. 194. *videtur* is passive.

238. *nativo ac mortali*, 'that was born and must die'; see n. to l. 60.

239. *eodem*, sc. *corpore constare*. *mundi natura*: see n. to l. 59.

242. *ferme*, 'as a rule': *fere* is identical in meaning.

244. *consumpta regigni*: see n. to l. 109.

245. *quoque item* is pleonastic, as either word would have sufficed: comp. *etiam quoque* l. 153, *inde porro* l. 204, *tum porro* l. 222.

246. *principiale*, 'of beginning'. *futuram*, sc. *esse*.

247—260. *But if I must prove that the elements are mortal, look first at earth and consider how it is blown away in dust by the winds and eaten away by the rivers; it is in turn replenished, as it is the tomb of all things.*

247. *in his rebus*, 'herein'. *corripuisse illud me mihi*, lit. 'that I have snatched this for myself', i.e. 'that I have assumed without proof'; *arripere* is used by Cicero in this sense.

249. *perire*: the common constr. after *non dubitare*, 'not to doubt', is *quin* and the subj., the inf. being used after *non dubitare*, 'not to hesitate'.

250. *rursus* goes with *gigni* as well as with *augescere*.

251. *principio* is taken up by *quod superest*, 'next', l. 261.

252. *multa pedum vi=vi multorum pedum*. Comp. Hor. Sat. i 4
141 *multa poetarum veniet manus*.

253. *nubes*, 'wreaths'.

255. *ad diluviem revocatur*, lit. 'is reduced to washing away', i.e. 'is washed away'; the phrase recurs, vi 292. With this use of *revocatur* comp. *redibat*, l. 1141. *diluvies* is the same word as our 'deluge'.

256. *radentia rodunt*: see n. to l. 109.

257. *pro parte sua*, 'in its turn', ἐν μέρει. *alid* is archaic for *aliud*; see n. to l. 1305.

258. *redditur*, 'has restitution made to it'; a strange use of the word. *dubio procul* is an adverb. *videtur* is passive.

259. *omniparens*, used as a noun, is the subj.: *eadem* is not an epithet, but part of the predicate.

260. *tibi*: ethical dat., of the person interested in a statement: 'so you see that the earth' etc.; see ll. 294, 805, 1209.

261—272. *So water is constantly welling up from springs, and pouring from rivers into the sea; but much is constantly carried off by the sun and wind, and much sinks into the earth, where it deposits its salt before finding its way back into the rivers.*

261. *quod superest*: see n. to l. 64.

262. *latices*: either internal acc. after, or subject to, *manare*.

263. *nil opus est verbis*, sc. *declarare* from *declarat* below.

264. *undique* goes with *decursus*.

primum quicquid aquai, τὸ ἀεὶ πρῶτον ὕδωρ. For *quisquis* = *quisque*, see ll. 131 and 284, 304 below.

265. *nil*: acc. of *nihil* used adverbially; comp. *hilum* l. 358.

267. *retexens*, lit. 'undoing its fabric', i.e. decomposing it. The metaphor is from weaving.

269. *virus*, 'the salt' of the sea-water.

So Seneca (Nat. Quaest. iii 5) says of the sea-water, *oculto itinere subit terras colaturque in transitu mare*.

271. *dulci*, i.e. not salt.

272. *pede*, 'course': we speak of a stream running, but we can hardly speak of its 'foot', though Jeremy Taylor could.

273—280. *The air too is constantly changing. It is continually increased by emanations from material objects; and it must give back as much as it receives, or else all objects would have become air by this time.*

273. *corpore*: abl. of part concerned.

274. *privas* = *singulas*: so *in dies privos*, l. 733.

275. In order to account for sensation, Epicurus taught that excessively fine films or images (*simulacra*) are constantly being thrown off from the surface of bodies and conveyed to the mind by the medium of the senses. See *Introduct.* p. xxiv.

277. *retribuat...forent*: an irregular condition, the rule in Latin requiring the same tense, as well as mood, in protasis and apodosis;

retribuere is what the sense naturally requires. For a different irregularity see l. 212.

278. *iam*, 'by this time'.

279. *cessat*, sc. *aer*.

280. *fluere*, 'to ebb', is said both of the images and of the bodies which throw them off.

281—305. *The same is true of fire. The sun is constantly sending out new light to supply the place of what is cut off by clouds. Lamps also and torches keep up their brightness by a constant succession of light, and the case is the same with the moon and stars.*

281. *liquididi*, 'clear-streaming'.

282. *inrigat*, 'floods'; the metaphor of *fons luminis* being kept up. *candor* is properly the white heat of glowing metal.

284. *primum quicquid fulgoris*, τὸ ἀεὶ πρῶτον φῶς. See n. to l. 131.

ei, i.e. *soli*; for the dat. comp. *tali*, l. 173. *ei* is always a spondee in Lucr., and either a spondee or one long syllable in such genitives as *rei*, *diei*.

285. *licet cognoscere possis*: pleonastic, as either *licet cognoscas* or *potes cognoscere* would suffice.

286. *succedere*, 'to pass beneath'; the original meaning of the word.

287. *inter quasi rumpere* = *quasi interrumpere*. This separation of the verb and the preposition (which is called *tmesis*) is universal in early language; examples may be found on any page of Homer.

289. *qua* and *cumque* make up one word.

290. *ut noscas*, i.e. *inde noscis*.

292. *posse*: inf. after *noscas*, l. 290. *in sole*, 'in the sun-light'. *videri* is passive.

294. *tibi*, 'you see': ethical dat.; see n. to l. 260.

295. *lychini* is the Greek λύχνοι with a vowel inserted, as in *Alcumena*, *mīna*, to make the word easier to Roman mouths.

clarae...pingues: for the double epithet see n. to l. 13.

296. *pingues*, 'resinous'. *multa caligine*: abl. of attendant circumstances, sometimes called absolute.

297. *ardore ministro*: abl. of means. In two lines Lucr. has four ablatives with a characteristic indifference to ambiguity.

299. *instant*: this rhetorical figure (*epanalepsis*), by which the

same word ends one line and begins the next, recurs l. 950. *rupta* is nom. sing.

300. The order is: *usque adeo properanter exitium ei (luci) celatur celeri flammae origine ab omnibus ignibus.*

303. *subortu*, 'fresh supply'.

304. *primum quicquid*: see n. to l. 131.

305. *ne credas*: final sentence; see n. to l. 114.

306—317. *The power of time prevails against the strongest things such as stones, rocks, and metals. When we see these decay before our eyes, we must infer that they have not existed from infinite time past.*

306. *ab aevo*: time is personified; hence the preposition.

308. *fessa* goes closely with *fatisci*.

309. *numen*, 'sacredness'; so *numen habere*, 'to be sacred'. *fati protollere fines*, 'to move forward the bounds set by fate'.

310. *posse*: inf. after *cernis*, l. 306.

311. *virum*: contracted gen. plur.: so *Chaldaeum*, l. 727.

312. The text is uncertain; I give the reading of Munro's first edition.

313. *non*, sc. *videmus?* *silices*, 'masses of basalt'; *silice sternere*, 'to pave', the Romans using the stone for this purpose.

315. *neque*, not *non*, is regularly used before *enim*. The sense is: 'finite time, I say; for if they had been there from everlasting, they would remain fixed for ever, and not fall down as we see them do'; see n. to l. 376.

316. *quaz=si ea*, the sentence being a protasis.

317. *tormenta actatis*: just so Shakespeare (Sonnet 65) speaks of 'the wreckful siege of battering days'.

privata fragore=sine frag.; Lucr. often uses *privatus* in the sense of *expers*; comp. *viduata*, l. 840, and Thuc. iii 63 *χάρις ἀσχύνης ἀπὸ πηλαγαμένης*.

318—323. *If it be true that the all-embracing ether begets all things and takes them back into itself, then ether must be subject to change and therefore mortal.*

318. *tuēre*, but *tuēre*, l. 92: in Lucr. *tui* is always 'to see', *tueri* either 'to see' or 'to maintain'. *hoc* is the ether.

320. *quidam*: particularly the Stoics.

321. *constat* = *est*, as in l. 144.

323. Compressed for: *deminui debet alendo et augendo, recreari debet cum recipit res*.

324—350. *Again if the world has existed from everlasting, why does not history go further back? We see too that improvements are constantly being made in the arts and sciences, which seems to prove them to be of recent origin. But if you hold that civilisation has advanced as far before and then been swallowed up by some convulsion of nature, then you must allow that a world, which is liable to such convulsions, is liable also to complete destruction.*

324. *genitalis origo*: see n. to l. 175.

326. *bellum Thebanum*: the expedition of Adrastus, king of Argos, against Thebes, in order to restore to his throne Polynices, the exiled son of Oedipus. This was the subject of the Thebais, a lost epic poem which the ancients ranked next to the Iliad and Odyssey.

funera Troiae: 'the destruction of Troy', as told in the Homeric poems.

328. *cecidere*, 'have vanished'; comp. ii 1165 *suspirat arator... incassum manuum cecidisse labores*, Hor. Ep. ii 1 51 *leviter curare videtur quo promissa cadant*.

330. *summa* = *haec rerum summa*, i.e. our world. See n. to l. 194.

331. *natura mundi*: see n. to *animi natura* l. 59.

exordia cepit: the metaphor is from beginning a web.

332. *etiam...nunc* go together, as in l. 17. *expoliuntur*, 'are reaching perfection'; a strict pres.

333. *nunc etiam*: the reverse order, as just above, is commoner; but comp. l. 20. *augescunt*, sc. *quaedam*.

334. *organici melicos*: so Plautus constantly uses Greek adverbs, e.g. *musice*, *basilice*, *more* (foolishly), *graphice* (cleverly). *melicos sonores*, 'musical tunes'.

335. *ratio*, 'system'. *natura rerum ratioque* is a hendiadys.

336. *nuper*: Epicurus was born in Samos in 342 B.C., three hundred years before Lucr. wrote.

primus cum primis is emphatic, like *in primis primum*, l. 59.

337. *possim* is consecutive subj., *qui* being = *talis ut*.

338. *antehac*: two syllables by *synizesis*: in the same way the first two syllables of *cooperuisse* (l. 342) coalesce.

339. *hominum saecula*, 'the generations of men'; *saeculum* is seldom 'age' in Lucr., generally 'race'.

vapore: see n. to l. 236.

341. *ex*, 'after'.

343. *tanto quique*, 'by so much, however much', i.e. 'by just that amount'. *quique* is the abl. of *quisque*. Comp. Livy iii 40 extr. *dilectum primo quoque tempore haberi*, 'at the first opportunity, whatever it be', i.e. 'at the first possible opportunity'.

victus fateare: see n. to l. 109.

344. *exitium*, 'utter destruction'.

346. *ibi*, 'at that time'. *tristior*, 'fiercer'.

347. *darent*: we should expect *dedissent*. Lucr. commonly uses *dare* with *ruinas*, *sonitum*, *crepitum*, *fragorem*, where a prose writer would use *facere*.

349. *inter nos*, lit. 'among ourselves', i.e. we men, as distinguished from inanimate things.

350. *atque*, 'as', after *isdem*.

351—379. *Anything that is eternal must satisfy one of three conditions. Either it must be impenetrable to blows, as atoms are; or it must be untouched by them, as void is; or there must be no room outside of it, into which it can pass, as is the case with the universe as a whole. But our world does not satisfy any one of these conditions and must therefore perish. You must also admit that a world which must some day perish cannot have existed from infinite time past.*

351. *necessumst* governs *respuere* l. 352, *pati* l. 353, and *posse* l. 356.

352. *solido cum corpore*: *cum* is superfluous, as there is an epithet; comp. ll. 364, 864.

353. *sibi*, 'into themselves': dat. of local relation, rare in prose: comp. Virg. Aen. xi 192 *it caelo clamor*.

queat is subjunctive, because *quod*=*tale ut*.

354. *intus* is properly used of *rest* within a place, *intro* of *motion*; so *intro ire*, but *intus esse*.

355. *corpora materialia*, 'bodies of matter', i.e. atoms: the first two books are mainly devoted to a systematic explanation of the properties of atoms and void, the two great constituents of the universe. See *Introduct.* p. xiv.

356. *durare*: see n. to l. 57.

357. *inane*, τὸ κενόν, 'void'; *vacuum*, *locus*, *spatium*, are other terms for the same. Void is exempt from blows because it is too impalpable to be affected by them.

358. *ab ictu*, 'in consequence of a blow'; comp. *ab igni* l. 604.

fungitur, 'is acted upon'; Lucr. commonly translates the technical terms *πράσχειν* by *fungi*, *ποιεῖν* by *facere*.

hilum is used adverbially like its negative *nihil* l. 265; the abl. *hilo* occurs l. 1409.

359. *nulla...circum*, 'there is no extent of space around'.

360. *quo=ut in eum*. *quasi* apologises for the oddness of the idea.

361. *summarum summa*: see n. to l. 194.

362. *qui=aliqui*: we should rather expect *ullus*.

dissiliant, sc. *res*.

364. The existence of void was proved in the first book, chiefly by two considerations: first, but for void, all motion would be impossible; second, the presence of void is necessary to explain difference in weight between bodies equal in bulk.

366. *est ut inane*, 'is it like void'.

368. *corruere*: active, a rare use; *ruere* is active in l. 1325.

hanc rerum summam: our world or *mundus*, opposed to the *omne* or *summarum summa*; see n. to l. 194.

369. *cladem pericli*, 'dangerous disaster'; the gen. serves as a kind of epithet; comp. *murmura minarum*, l. 1193, Catull. 23 11 *casus alios periculorum*, Aesch. Pers. 438 *συμφορὰ πᾶθους*.

370. *natura loci=locus*, a periphrasis common in Lucr.; see n. to l. 59. *spatium*, *χώρα*, is another name for *inane*, implying the motion of bodies through it.

372. *pulsa perire*: see n. to l. 109.

375. *immane*: acc. neut. of the adj. used adverbially. *respectat*, 'looks towards them'.

376. The same argument as ll. 315—317: if these things are to be destroyed at some future time, they cannot have existed from infinite time past; in the language of Lucr., if they are *mortalia*, they must also be *nativa*.

377. *neque enim*: see n. to l. 315.

380—415. You might guess the final destruction of the world when you note the perpetual warfare between fire and water, each striving to gain the mastery and destroy the earth. Legends tell that each prevailed once, fire, when Phaethon was run away with by the horses of the sun, water, at the time of a great deluge. And science agrees with legend though it assigns different causes.

381. *membra*: i.e. fire and water.

pio nequaquam=*impio*, 'civil' war. An old Roman formula speaks of *purum piumque duellum*.

382. *ollis* is archaic for *illis*; it is found in Virgil.

383. *vel cum* should be answered by *vel cum umor*, but there is a change of construction at l. 386.

384. *exsuperarint* is fut. perf.

385. *neque adhuc*=*sed nondum*. *patrarunt* is a probable correction of the MS. reading *patrantur*.

386. *tantum*, 'so much'. *ultra*, 'besides', not content with keeping the fire down; *ultra* is very common in this sense in Tacitus.

387. *diluviare*: pres. infin., instead of future, common in old Latin after verbs of promising, hoping etc.; so *confidunt posse*, l. 390, Plaut. Mil. Glor. 229 *hoc si unus recipere ad te dicis*.

388, 389. See ll. 266, 267.

390. *prius quam possit*: it seems that *prius quam* and *ante quam* in Lucr. take the subj., unless *quam* comes before *prius* or *ante*; comp. iii 973 *quam nascimur ante*, vi 979 *quam adgredior...prius*.

392. Note the assonance of *certamine*, *cernere*, *certant*.

393. *cernere*: archaic for *decernere*; with a different sense, l. 782.

394. *interea*, 'nevertheless', like *eodem tempore*; see n. to l. 83.

396. *superāt* is a contracted form of *superavit*, as the context requires and the quantity proves; there are two similar forms in Lucr., *inritat i 70*, *disturbat vi 587*; in all three cases the *-at* is followed by a vowel.

397. *avia*, like *obvius* in l. 402, must not be translated as a mere epithet. Phaethon induced his father Helios to let him drive the chariot of the sun for one day, and nearly set the world on fire.

398. *aethere*: abl. of place where, *not* of place whence; so *toto aere* l. 254, *toto orbi* l. 1166. *per*, 'over'.

400. *magnanimum*, 'aspiring'; perhaps sarcastic.

rēpenti: this adj. (to be distinguished from *rēpens*, 'crawling') is very rare; the adv. *rēpente* is common; but *repentinus* is the usual form of the adj.

401. *deturbavit*: so (Plaut. Mil. Glor. 160) Periplecomenus tells his slaves, 'if you see anyone on our roof', *huc deturbatote in viam*.

402. *aeternam*: as Lucr. is engaged proving the sun among other things not to be eternal, this epithet can only be justified on poetical grounds, unless he is actually translating from a Greek poet.

404. *suum iter*, 'their right path'; *suum* = *proprium* and does not refer to *sol*, the subject of the sentence, by a licence common to all the poets.

recreavit cuncta to be taken together.

405. *scilicet*, 'forsooth'; contemptuous.

Graium: gen. plur.

408. *plura*, i.e. more than usual.

409. *revictae*, 'conquered in turn'; comp. Hor. Od. iv 4 23 *victrices catervae consiliis iuvenis revictae*.

410. *aut*, 'or else', εἰ δὲ μή.

411. *quondam*, i.e. in the time of Deucalion, the Noah of Greek mythology. *superare coortus*: see n. to l. 109.

413. *ratione* = *modo*. *aversa recessit*: see n. to l. 109.

416—431. *I will now describe the formation of the earth, sky, and sea, and the motions of the heavenly bodies. The world was not purposely formed by conscious atoms; it is the chance result, after endless experiments, of their blind motions and clashings.*

416. *ille coniectus*, 'yon concourse'; vivid. Comp. l. 67.

417. *fundarit*: indirect question after *ponam*.

418. *ex ordine*, 'next in order', ἐφεξῆς; *ordine* often = 'from beginning to end'.

419. *consilio*, 'by design'. *primordia rerum*: see n. to l. 184.

420. *suo* is one syllable, being pronounced *swo*.

421. *darent*: the direct question is *quos demus motus?* where *demus* is deliberative; so *darent* is doubly subjunctive. For *dare* with *motus* and similar words, see n. to l. 347.

424. *concita* goes with *ponderibus*.

425. *omnimodis*: see n. to l. 190, from which passage ll. 422—426 are repeated.

427. *volgata*, 'spread abroad'.

428. *omne genus* is acc. used adverbially as in l. 437, 'of every kind'; comp. *homo istuc aetatis*, a common Plautine phrase. *coetus* and *motus* are both acc. plur.

429. *ea*: the subject, which has previously been atoms generally, is suddenly restricted to a particular concourse of them.

430. *saepe*: worlds such as ours are innumerable, and the creation of one such often happens.

432—448. *In the original chaos there were no separate objects, no sun or moon, no earth, sky, or sea, only a medley of warring atoms: gradually the parts of the world began to separate.*

432. *hic*, 'then'; again, l. 1002; it seems not to differ from *tum*.

433. *mundi*=*caeli*, as often.

435. *nostris rebus*, 'the things we see'. *videri* is passive.

436. 'but only a strange stormy crisis and medley'; so Ovid (*Met.* i 7) calls chaos *rudis indigestaque moles*.

437. *omne genus* is adverbial, going with *principiis*; *id genus* and *quod genus* also are so used; see n. to l. 428.

quorum goes with *discordia*, and out of it *eorum* is to be supplied with all the accusatives governed by *turbabat*.

441. *sic*, 'straight off', 'at once', *ὄντως*; comp. the use of *sic*, l. 970.

442. *motus dare*: see n. to l. 347. *inter sese con.*: 'mutually harmonious'.

443. *inde loci*, lit. 'thence of place', i.e. 'in the next place'. Notice how all the prepositions, with which the verbs are here compounded, imply separation, *dis-* being used four times and *se-* five times; the former denotes the separation of several, the latter of two things.

447. *pateret*: the construction suddenly changes, the infin. giving place to a consec. subjunctive; see n. to *efficerent* l. 454.

448. *aetheris ignes* are the heavenly bodies.

449—494. *The heavy atoms met together in the middle of chaos and by their close union squeezed out the smaller and lighter atoms. These rose up and formed the ether, which walls in the world, and the heavenly bodies, whose atoms are lighter than those of earth, heavier than those of ether. When these had withdrawn, the hollows which the sea now fills, were flooded with salt water; and as condensation of the earth constantly went on owing to the heat of ether and the sun, therefore more light atoms of ether and salt atoms of sea-water were constantly squeezed out.*

449. *quippe etenim*: see n. to l. 126.

450. *perplexa*, sc. *inter se*.

452. *perplexa coibant*: see n. to l. 109.

453. *tam*, for *tanto*; also l. 487; *quanto* is often followed by *tam* in *Lucr.*, instead of *tanto*.

454. *efficerent*: consec. subj. Lucr. will not admit anything like design in the formation of the world; consequently the final subj. is inappropriate here. 'The walls of the great world' are the ether, *mundus* being used as in l. 433.

456. *minoribu'*: see n. to l. 53.

457. *rara*, 'porous', not 'scattered'.

459. *lævis*: transl. by the adverb for convenience, and notice the meaning different from *lævibus* above.

460. 'much in the same way as'; again, l. 1030. The construction is a little irregular: *videmus* should be followed by an acc. and inf., but at l. 465 the sentence takes a different turn.

461. *aurea...matutina*: see n. to l. 13.

464. *ut*, 'as'; *ut* 'when', is probably not Lucretian.

465. *quæ*, the mist from the water and smoke from the ground.

in alto, 'on high'; again, l. 584.

466. *corpore concreto*: because clouds are substantial compared to mist and smoke.

subtexunt etc.: 'as clouds they weave a covering beneath the sky'; *nubila* is in apposition. Comp. vi 482 *aestus...subtextit caerulea nimbis*.

468. *circumdatus*, 'sweeping round'.

469. *partes*, 'directions'.

470. *avido*: comp. *avidis montes* l. 201.

471. *exordia*, 'rudiments'; see n. to l. 331.

472. *interutrasque*, 'in the middle', i.e. between earth and ether; an adverb formed like *foras*, *alias*; comp. *interea*.

475. Before *levia* repeat *tam. labier*: archaic for *labi*.

476. *ita sunt ut*, 'though they are..., yet they...'; the *limitative* use of *ita ut*.

viva, like *aeternam* l. 402, is a merely poetical epithet; for comp. ll. 122—125.

477. *mundi totius* includes earth, sky, and sea.

extent = sint.

478. *quod genus* is adverbial, like *omne genus*, l. 428.

in nobis, 'in our bodies'.

479. *sint ea quæ mov.*, *ἔστιν ἃ κινεῖται*, 'some are in motion'.

480. *retractis*, 'withdrawn'.

482. *fossas*: *κόλλους τόπους* in the original (see Plut. de plac. phil. i 4) which Lucr. seems to be translating.

483. *circum*: adverb, *aestus*, 'heats'.

485. *verberibus...limina*, 'by constant blows on its outer surface'.
in artum goes with *cogebant*.
486. *condensa* is for *condensata* which is never used.
487. *corpore*, sc. *terrae*.
489. *illa*, 'of which I spoke'.
490. *vaporis*: see n. to l. 236.
alta...fulgentia: see n. to *divina antiqua* l. 13.
491. *densebant*: each reinforcement of particles squeezed out from the earth made ether more substantial. *templa*: see n. to l. 103.
492. *montibus*: dat. *commodi*; comp. *artibus*, l. 1457.
493. *neque enim*: see n. to l. 315. The level was unequal because rocks could not sink at all and other things sank an unequal amount.
494. *pariter tantundem* is pleonastic.
- 495—508. *So the earth sank to the bottom, separate from the sea and other lighter parts of the world. Of all parts the ether is the lightest and soars above the rest, untroubled by the storms which go on beneath it.*
495. *terrae pondus*, 'the heavy earth'; so *argenti pondus*, l. 1242.
496. *constitit*, 'became solid'. *mundi*, in the same sense as in l.
433. *quasi* apologises for the strange expression *limus*.
497. *gravis*, 'by its weight'.
498. For the distinction between *aether* and *aer*, see n. to l. 85.
499. *liquidis*: see n. to l. 281.
500. *aliis alia*, sc. *sunt*.
502. *turbantibus*, 'troubled'; here and l. 504 the verb has a neuter sense; so l. 831 *vertere* = *verti*, l. 1422 *convertere* = *converti*.
503. *haec omnia*, 'all before our eyes', i.e. the troubled air below ether.
505. *impete*, 'motion', archaic for *impetu*; see n. to l. 200.
506. *uno nisu* is co-ordinate with *modice*.
507. *Pontos* is the Pontus Euxinus or Black Sea; comp. Seneca Nat. Quaest. iv 2 29 *ob hoc Pontus in infernum mare adsidue fluit rapidus...in unam partem semper pronus et torrens*; Juv. iv 43 *torrentis ad ostia Ponti*. There is a constant current from the smaller sea into the Mediterranean.
508. This smooth gliding line well expresses the sense.
- 509—533. *Next as to the motion of the stars; if the sky revolves, the axis of its sphere must be kept steady by an air blowing on each pole,*

and the motion of the stars is due to a third air, which blows, either above the sphere in the direction in which the stars move, or below the sphere in the contrary direction. If the sky does not revolve, the motion of the stars is due either to heats inside themselves, or to an air from without, or to their own volition. It is impossible to say which of these causes operates in our world; but one of these mentioned it must be.

This paragraph interrupts the narrative, and there is no place in the book where it fits in naturally, though it ought properly to come in with the description of sun and moon. It appears to have been a subsequent addition which was never properly connected with the rest.

509. There is no special mention of the planets here or elsewhere in the book.

510. Lucr. regards this as an open question though he speaks, l. 1436, of *mundi versatile templum*.

511. *ex utraque parti*, 'at each pole'. *polum* is the axis, not the pole, of the sphere of heaven. *aera* is the subject to *premere*.

512. *utrimque*, 'at both ends'. The two airs serve to keep the axis of the sphere steady; a third is required to put the sphere in motion. It is important to realise that the stars are included in the sphere; comp. l. 1205.

513. *alium*, sc. *aera*.

514. *quo volvenda micant*=*quo voluntur micantia*. *volvenda*=*volventia* of l. 931, the gerundive being used as pres. particip.; so *secundus*, 'following', from *sequor*. This use of *volvendus* recurs l. 1276, and twice in Virgil (*Aen.* i 269, ix 7).

aeterni: see nn. to ll. 402, 476.

515. *alium*, sc. *aera fluere*. *subvehat*: final.

516. The wheel here spoken of, still common in the East, is intended for irrigation; it is made to revolve by the current, and draws water out of the river by means of the *haustra*, 'scoops', attached to it. These scoops are mentioned here only because they are fastened to the wheel as the stars are to the sphere of heaven. *fluvios* is the subject to *versare*.

517. *est uti possit*=*potest*; pleonastic; comp. l. 146.

519. *inclusi*, sc. *in signis*. *rapidi*: nom.

520. *viam*, 'a way out'. *ignes*, sc. *signorum*.

521. *Summanus* was an obscure deity (*quisquis is est*, says Ovid) who caused night-thunder; hence *Summania templa* are the nightly sky; for *templa* see n. to l. 103.

522. *aliunde alicunde* = ἄλλοθεν ποθεν, 'from some other place'; i. e., the air is not, like the heats, shut up in the stars themselves.

523. *versat agens*, 'drives and whirls'. Here again *Lucretius* seems inconsistent in attributing volition to the stars; we may account for it as we have already accounted for such epithets as *aeternus* and *vivus* (ll. 402, 476).

524. *cuntes* is nom. plur.

525. *pascentes*: the food of the stars is fire. *Comp. i 231 unde aether sidera pascit?* *Seneca* (*Nat. Quaest. vii 21 2*) accounts thus for the motion of a comet: *ignium modo alimentum suum sequitur.*

526. *quid sit eorum*, 'which of these (explanations) holds?'; an indirect question after *ponere certum.*

certum, 'for certain'.

527. *possit = potis sit*, 'is possible'. *omne, τὸ πᾶν*, is the *summa summarum*, the entire universe.

529. *sequor disponere*, 'I go on to distinguish'; a rare use of *sequor = pergo.*

531. *hoc = hac rerum summa*, our world.

532. *vegeat*: an active verb. *signis*: dat. *commodi earum*, sc. *causarum.*

533. *progredientis*: the adjectival or attributive genitive; rash assertion is not the *attribute* of one who etc.

534—563. *The earth remains at rest in the middle of the world because the weight of its lower parts is less than that of the upper. Indeed its substance beneath is different and more akin to air. From its long connexion with the air, the weight of the earth is not felt any more than a man feels the weight of his own limbs. The air sustains the earth without effort just as the soul sustains the body.*

535. *pondus*, sc. *terrae.*

536. *convenit* is impersonal.

naturam, 'substance', is object to *habere*, *terram* being supplied as subject. This substance of which the earth is composed below must be lighter than earth itself in order to account for the earth resting in the middle of the world. Apparently *Lucretius* conceived the earth to be a more or less flat surface both above and below.

The stability of the earth was a great problem to the ancients, owing to their ignorance of the nature of attraction; some believed that the earth was constantly falling through space (Seneca Nat. Quaest. vii 14 4) though the motion was imperceptible.

537. *uniter*: so *longiter* l. 133, *duriter* l. 1402; but the gen. and dat. sing. of *unus* make this form less strange. *aptam*: particip. of archaic verb *apĕre*, 'to fit', the only part used; to be distinguished from *aptus* particip. of *apisci* (see n. to l. 808).

538. *vivit*: see nn. to *vivit* l. 476, *aeternam* l. 402.

539. *non est oneri*, sc. *auris terrā*. *oneri*, lit. 'for a burden', is a predicative dat.

540. *pondere*: abl. of description.

543. *imposta*=*imposita*; so we say *imposition* but *impostor*, both derived from *imponere*.

545. *magni*: locative of price: *rĕfert* and *interest* take also a gen. of the person concerned, e.g. *magni rĕfert Ciceronis*; but instead of the gen. of the personal pronouns, the abl. sing. fem. of the possessive adj. is used, e.g. *meā* (not *mei*) *rĕfert*.

quid obeat=*quod munus obire debeat*.

546. *est* belongs to *allata* below; see n. to l. 90. *aliena* is part of the predicate; 'the earth is not an alien body suddenly brought in' etc.

548. *pariter*, sc. *cum auris*.

549. *eius*, i.e. *mundi*. *videntur*, sc. *esse certae partes nostri*.

551. The 'things above the earth' are the air.

554. As subject to *haerent*, sc. *terra et aer*.

555. *uniter apta*, 'framed into one': see nn. to l. 537.

556. *magno pondere*: abl. of description, going with *corpus*; 'how heavy our body is, which' etc.

557. *tenuissima*: see n. to l. 148. *animai*, 'of the soul'; see n. to l. 59.

559. *iam*, 'actually', goes with *saltu pernici*; see n. to l. 1066.

560. *potis* is neuter, as in l. 719; see n. to l. 1. *animi*, 'of the mind'; see n. to l. 59.

561. *quantum valere possit*: pleonastic for *quantum valeat*.

563. *nobis*, i.e. *corporibus nostris*.

564—591. *The disc of the sun cannot be much larger nor his heat much less than they appear to our senses; for we observe that the size of fires on earth does not diminish to our view so long as we can see*

their light at all and feel their heat. The same is true, for the same reason, of the moon and stars.

The argument seems to us false and the conclusion ludicrous. This belief was peculiar to the Epicureans. Seneca, a Stoic, writes thus (Nat. Quaest. i 3 10): *solem, quem toto terrarum orbe maiorem probat ratio, acies nostra sic contraxit ut sapientes viri pedalem (a foot long) esse contenderent.* And Cicero, who was a contemporary of Lucr., ridicules the theory in almost the same words (Acad. ii 82): *quantulus nobis sol videtur! mihi quidem quasi pedalis. Epicurus autem posse putat etiam minorem esse eum quam videatur.* See *Introduct. p. xxx.*

564. *nimio* = *multo*; common in Plautus in this sense.

566. *quibus* and *cumque* make up one word. *ignes*: nom.

567. *adicere*: *iacio* when compounded (-*icio*) loses its initial *i*, though the preposition (in this case *ad*) remains long; comp. *obiciens* l. 755. *vaporem*: see n. to l. 236.

568. *illa*, sc. *spatia*. *intervallis*: abl. of cause.

569. *nil*: see n. to l. 265. *ad speciem*, 'to the eye'; here *species* = $\delta\psi\iota\varsigma$, in l. 94 it = $\epsilon\iota\delta\omicron\varsigma$.

571. *loca*, sc. *corporum nostrorum*.

572. *hinc*, 'from the earth'. *filum*, 'size'.

574. *nil adeo*, 'nothing whatever'; *adeo* often emphasises the word it follows, but with negatives it is rare; *nil adeo* recurs vi 1:70; *nec adeo*, Virg. Ecl. ii 25, Aen. iv 96.

vere, 'in their real dimensions', goes with *videri*.

577. *quidquid id est*, 'however that be'; again, l. 1252.

nilo, 'by nothing'; abl. of amount of difference.

578. The whole sentence is: *quam ea figura, qua cernimus lunam ferri, esse videtur.*

579. *prius*: join with *quam* in l. 581.

580. *specie confusa*, 'blurred in appearance'; a different sense of *species* from l. 569.

581. *minui*, sc. *videatur*. *nesse est* commonly is followed by the subj. (here *videatur*, l. 584) without *ut*.

583, 584. 'must be seen in the sky by us on earth exactly as it is defined by its outlines and of the size it actually is'. The meaning would be clearer if we had *nesse sit notata utcumque nobis videtur*. *ut* and *cumque* make up one word. *est* belongs to *notata*; see n. to l. 90.

584. *quanta quanta* = *quantacunque*, just as *quisquis* = *quicumque*.

585. *quoscumque*: the antecedent is *eos* to be supplied as subject to *posse*, l. 590.

587. *tremor*, sc. *eorum*. *cernitur*, 'is perceived'.

588. *perparvum quiddam*: internal accus. after *mutare* (= *mutari*); comp. *nil*, l. 569.

589. *alteram utram*: commonly written as one word, *alterutram*. *filum*, 'size', is subject to *videtur*.

591. *parte*: abl. of amount of difference, as *quo* and *pauxillo* are above.

592—613. *It is possible to explain the great heat of so small a body as the sun in any of three ways. Either all the heat of the world streams to that one spot; or perhaps the heat is due to the air when fired by the sun; or perhaps there is round the sun a great deal of heat which emits no light.*

593. *ille sol*, 'yon sun'; so *ille coniectus*, l. 416.

594. *quod* (the relative) = *tantum ut* and is therefore followed by the consec. subj. *compleat*. *rigando*, 'by flooding them'; comp. *inrigat* l. 282.

596 is omitted in the text as it is only l. 584 repeated by mistake.

597. *hinc*, i.e. *e sole*. *unum*, = τὸν μόνον, not τινά.

598. *scatĕre*: see n. to l. 40. *lumen* is object to *erumpere*, which is usually intransitive. Comp. l. 952.

600. *coniectus eorum*, 'the mass of them thrown together'.

601. *capite*, 'fountain head'. *hic* is the pronoun, not an adv.

603. *campis*: local ablative.

604. *etiam quoque*: pleonastic; comp. l. 153. *non magno*, 'although not great'. *ab igni*: see n. to *ab ictu* l. 358.

605. *percipiat*, 'may take possession of'; a rare meaning of the word. Comp. iii 28 *me...voluptas percipit atque horror*, for which Cicero would have said, *percipio voluptatem*.

606. *ita*: to be taken with *ut* below.

608. *quod genus*: see n. to l. 428. *segetes stipulamque*: acc. after *accidere*, though *accidere* usually is followed by *in* or *ad* with acc.

611. *fervoribus*: abl. of description.

613. *tantum*, 'merely', qualifies *aestifer*; the *ignis* gives no light.

614—649. *There are two ways in which it is possible to account for the annual course of the sun in heaven and for the fact that he performs*

in a year the same journey which the moon performs in a month. Either, as Democritus held, the heavenly bodies nearest the earth go slowest, because they are least affected by the revolution of the sky, so that the stars move faster than the sun, and the sun than the moon. Or the motions of all the heavenly bodies may be due to currents of air, blowing first in one direction, then in another.

For an explanation of the technical terms used in this paragraph, see plan of the celestial sphere on p. xxvi.

614. *ratio*, 'explanation'. There are several possible explanations of the sun's annual motion as there are of his heat.

615. *partibus*, 'positions'. *aegocerotis* (Greek for *capricorn*) goes with *flexus* below.

616. *flexus*, 'turning-point', = *metas* below; the metaphor is from a race where the chariots turned at the *meta* for the return journey.

617. *solstitiales*: there are two solstices in the year, when the sun is furthest from the equator in winter, and again in summer; see p. xxviii; but Latin writers often confine the term to the latter, as here, using *bruma* or *hiemps* as the opposite to *solstitium*; comp. Virg. Georg. i 100 *humida solstitia atque hiemes orate serenas*.

618. *lunaque*: i.e. *et quo pacto luna* etc.

619. *in quo cursu* may be transl. 'in traversing which'.

621. *vel cum primis*, lit. 'even with the first', i.e. 'very probably'.

622. 'the revered judgment of the sage, Democritus'.

Democritus, the 'laughing philosopher', was born at Abdera in Thrace about 460 B.C. His learning was astonishing for his time, especially in physics. Lucr. refers to him again in the same respectful terms, iii 371.

623. *sint*: subj., because *oratio obliqua* has been introduced by *ponit*. *propter*: for position, see n. to l. 31.

624. *caeli turbine*: see n. to l. 510.

625. *evanescere*, sc. *ponit Democritus*. *illius*, i.e. *turbinis caeli*.

626. *imminui* after *evanescere* is a *hysteron proteron*, i.e. we should expect the order of the verbs to be reversed; comp. l. 535.

627. *posteriora signa* are those signs of the zodiac which at any given time have not yet passed the sun, though they will shortly do so.

628. *fervida signa* are the signs of the zodiac generally, which are nearer the revolving sphere of heaven and therefore move faster than the sun.

629. *et magis hoc lunam*, sc. *relinqui docet*. *hoc*, i.e. *sole*.

630. *abest...propinquat*: indicative in spite of the *oratio obliqua*; Lucr. is anticipating the *oratio recta* into which he passes at l. 632.

631. *posse*, sc. *lunam*. *tendere cursum*, 'to keep up'.

634. *circum* is the adverb.

635. The moon, owing to her nearness to the earth, goes so slowly and the signs of the zodiac so fast, that they all pass her very rapidly; but to our eyes it seems as if she were passing them in the contrary direction.

636. *reviso* more commonly takes a simple acc.

637. *fit...ut possit=potest*; pleonastic. *mundi=caeli*. *transversis*, 'crossing the sun's path'.

aer...alter: transl. as if this were: *duo aeres quorum alter...*

638. *alternis*: adverb.

639. *qui=talis ut*.

640. *flexus*: see n. to l. 616.

641. *et qui*: as antecedent to *qui*, sc. *alter*.

643. *ratione pari*, 'in like manner'.

644. *volvunt=volvendo faciunt*. *orbibus*, 'orbits'.

645. *aeribus*: causal abl. *alternis* agrees with *partibus*.

647. *supernis* is dat. governed by *diversas*; the words may be expanded thus: *in partes contrarias eis partibus in quas superna eunt*.

648. *qui* is the ablative; see n. to l. 233. *qui minus*, lit. 'how the less', i.e. 'why not as well'.

650—655. *Night comes on, either because the sun's fires are exhausted by their long journey, or because the same force as made him rise now makes him set beneath the earth.*

651. *de*, 'after': Plaut. Mostell. 697 *non bonust somnus de prandio. ultima caeli*; see n. to *viai cuncta* l. 739.

652. *impulit*, 'has struck'. *efflavit*: comp. the phrase *efflare animam*, 'to die'.

653. *itere* for *itinere*; Lucr. once (vi 339) has *itiner* for the nom., exactly the reverse of later usage, which has *iter*, *itineris*.

655. *orbem*, 'orb', but 'orbit', l. 648; in each case the context must determine the meaning.

656—679. *The regular recurrence of dawn may be accounted for in two ways. Either the same sun, returning below the earth, sends his light before him; or a new sun is born every day by the streaming*

together of fires at a fixed time every day. If the latter explanation be the true one, there is no reason to wonder at the regularity of sun-rise; for there are many instances in nature of a regular recurrence of phenomena.

656. *Matuta*, or *Mater Matuta*, the goddess of dawn, identified by some Latin writers with Juno, by others with Ino Leucothea, a marine goddess. *oras aetheris*: see n. to l. 85.

657. *pandit*, 'opens up'.

658. *sub terras*: acc., because the sun is in motion.

ille is in apposition with the subject *sol*, and serves to give it emphasis; a favourite idiom of Cicero.

659. *anticipat* governs *caelum*, which is understood as object to *accendere*.

661. *consuerunt*: three syllables by *synizesis*; see n. to *suo*, l. 420.

662. *semper*, i.e. every day.

663. *quod genus*: see n. to l. 428. *Idaeis*: a range of mountains in Phrygia. Other ancient writers mention this strange legend.

664. *orienti* is a participle, not an epithet.

665. *inde*: temporal.

666. *in his rebus*: see n. to l. 247.

671. *arbusta* is used by Lucr. for *arbörēs* which his verse will not admit, but not *arbustis* for *arboribus*; see l. 786; so he uses *principiorum* as the gen. of *primordia*, l. 184.

672. *cadere imperat*: *imperare* commonly takes *ut* and subj., *iubere* the simple inf.

673. *impubem*, 'the boy'.

674. *pariter* (going with *mālis*) = *pari parte*, 'in equal length'; comp. i 87 *infula...ex utraque pari malarum parte profusast*, 'the fillet fell down in equal lengths from each cheek'.

678. *mundi*: after *origine*. *cecidere*, 'have fallen out'.

679. *consequē*, 'in due sequence'. *quoque* is here used like *kal* in apodosis, e.g. $\acute{\omega}\varsigma\ \delta'\ \acute{\epsilon}\delta\omicron\zeta\epsilon\nu\ \alpha\upsilon\tau\acute{\omega}$, $\kappa\alpha\lambda\ \acute{\epsilon}\pi\omicron\lambda\eta\sigma\epsilon$. *redeunt*, sc. *res*.

680—704. *There are also several ways of explaining why days are long and nights short in summer, while the reverse is true in winter. First we may suppose that the sun's daily path is divided into two parts, viz. the part below the earth and the part above; and that these two are never equal, except at the equinoxes. This will explain why a long day must be followed by a short night, and vice versa; for*

however much be subtracted from the sun's path beneath the earth, viz. the night, just as much must be added to his path above it, viz. the day, the whole length of his path being constant. All this you may see in a map of the heavens. Again, the long nights of winter may be due to a thickness of the air in certain regions which prevents the sun from rising. Lastly, if we assume that a new sun is born every day, alternate slowness and quickness in the streaming together of fires will account for the alternate length and shortness of the days.

See plan on p. xxvi.

680. *tabescere*, 'wane'; Plaut. Stichus 648 *quasi nix tabescit dies*.

681. *lucet*, 'days'; *soles* is used in the same sense.

sumant: see n. to l. 63; it seems that Lucr. uses the subjunctive here because he is discussing a hypothetical case.

682. *sol idem*: opposed to the daily created sun of another theory.

683. *imparibus*, 'of unequal length'; *aetheris oras* includes the ether below the earth.

684. *partes*, 'two parts': *δίχα τέμνει ἄνισα τμήματα τὴν ὁδόν*.

685. *reponit*, 'adds in compensation'.

686. *eius*, i.e. *orbis*. *tanto plus*: *tantundem* would be more accurate. *relatus*, 'when he comes round', i.e. from beneath the earth or above it.

687. *signum caeli*, i.e. sign of the zodiac, the sign being the Ram at the vernal equinox, and the Scales at the autumnal.

688. *nodus anni*, 'the node of the year', is the intersection of the ecliptic (the sun's apparent annual path in the heavens) and the equator, at the equinoxes; see plan on p. xxvi.

689. *medio cursu* is abl. absol.; with *cursu*, sc. *solis*; *medio* governs *flatus*. The meaning is: when the sun's daily course is due east and west.

690. 'heaven keeps his two goals apart at an equal distance'; i.e. the distance between his rising and setting is exactly equal to that between his setting and rising, and consequently the day is exactly equal in length to the night. *metae* here are the points where the sun rises and sets, not, as in l. 617, the solstices.

691. *signiferi orbis*, 'the starry circle', i.e. the zodiac, so called from the animals (*ζῳδία*) after which the constellations are named.

693. *obliquo lumine*, 'with slanting light'.

694. *ratio*, 'science'.

695. *notarunt*, 'have mapped out'.

697. *sub terris*: abl., because the sun is stopped; comp. acc. in l. 658.

700. *dum veniat*: *dum* expressing (as here and l. 976) *expectation* generally takes pres. or imperf. subj.; *dum* expressing *purpose* always takes subj.; *dum*, 'whilst', takes pres. ind.

radiatum, 'with rays shooting from it', not merely 'beaming'.

insigne, 'ensign', 'badge'; used as a noun: again, l. 1138.

701. *sic*, i.e. for the reason just mentioned, thickness of air.

703. *certa*, a 'particular' but not a fixed quarter.

parte is governed by *de* of the verb.

704. The line in italics was written by Munro to supply a lost line of the original.

705—750. *The phases of the moon may be explained in various ways. She may derive her light from the sun, so that she is at the full when she is right opposite him, but gradually loses her light as she approaches him, and is quite dark when between the earth and the sun. Or her light may be her own, and the phases may be due to an opaque satellite of her own which is constantly getting in her way and shutting out her light from us. Or it may be true, as the Chaldaeans teach, that she is a sphere of which only one half is bright; the revolution of such a sphere would bring about the phases we see. Or, lastly, a fresh moon may be born every day, each with a different phase, in regular succession; we see many things come round in regular succession, as for instance the four seasons.*

The account Lucr. gives first is the true one; see p. xxviii; it is quite incompatible with his own views as to the size of the sun and moon.

707. *ad speciem*: see n. to l. 569.

708. *donique*=*donec*; *donicum* is another old form, common in Plautus. *contra*: preposition. *pleno bene*, 'right full'; comp. vi 507 *bene multa*.

709. *super* and *edita* form one word. It is the case that the moon, when full, rises about sunset.

710. *retro quasi condere lumen*, 'reversing as it were her course, to hide her light'; the expression is exceedingly condensed.

711. *debet*, 'she must', i.e. on this theory.

712. The moon, like the sun, travels through the zodiac but not in the same orbit. *signorum orbis*=*signifer orbis* of l. 691.

713. *faciunt*, 'make her do'; as subj. to *faciunt*, supply *ii*.

714. *cursus viam*, 'the path of her orbit'; comp. *iter viai*, l. 1124.
715. *est quare possit* means no more than *potest*.
716. *volvier*=*volvi*; comp. *dignarier*, l. 51.
formas, 'phases'.
718. *omnimodis*: see n. to l. 190.
719. *potis est*: see n. to l. 560.
720. A third explanation. *potest*, sc. *luna*. *si forte*=*fortasse*, 'possibly'. *globus pilai*, 'a round ball'.
721. *parti*: archaic abl.; see n. to *orbi* l. 74.
723. *donique*: see n. to 708. *partem*, 'half'.
ignibus aucta, 'illuminated'; comp. the phrase *augeri filio* (Cic. ad Att. i 2 1; Tac. Agr. vi 3).
724. *ad speciem*: see n. to l. 569.
725. *retro* goes with *contorquet*.
726. *glom. atque pilai*=*globi pilai* of l. 720; it is a *hendiadys*.
727. *Chaldaeum*: gen. plur. The *Chaldaei* (vulgarly called *mathematici*) were the successors of Berosus, a priest of Belus in Babylon about 250 B.C.; they were soothsayers and astrologers, and therefore disliked by the scientific astronomers, the *astrologi* of l. 728.
728. *artem*, 'the system'. The *astrologi* gave the right explanation of the moon's phases, which Lucr. puts first (ll. 705—714), though he will not allow it greater probability. *contra*, 'in opposition', adverb; it often = 'in exchange'.
729. *pugnat*, 'fights for'.
730. The order is: *aut (quasi) sit cur hoc minus illo ausis amplectier*.
731. *cur nequeat* is an indirect question, depending on *docere* l. 735.
semper, 'every day'.
732. This does not mean that each separate moon goes through all the phases, but that each moon represents one phase.
733. *privos*: see n. to l. 274.
734. *parte* is strangely used in the sense of *loco*.
735. *vincere*=*convincere*; comp. Virg. Georg. iii 289 *verbis ea vincere*, Hor. Sat. i 3 115 *nec vincet ratio hoc*.
- 737—747 describe a kind of masque or pageant of the seasons, which are used as an example of the regularity of natural phenomena.
737. *it*, 'goes on its way'.
738. The 'winged harbinger of Venus' is Cupid.
propter governs *vestigia*; for its position see n. to l. 31.
739. *quibus*, i.e. *Veneri et Veneris praenuntio*. *ante*, 'in front of

them'. With *viai cuncta*, comp. *ultima caeli* l. 651, *caerula mundi* l. 771.

The order is: first the West Wind, then Flora his wife, then Cupid, and last Venus and Spring. The Latin name of Zephyrus is Favonius; Pliny and Columella say that this wind always began to blow on Feb. 7th and marked the beginning of spring.

740. Notice the assonance in this fine line which has somewhat of the effect of rhyme. Lucr. is thinking especially of the beauty and fragrance of the rose which was *the* spring flower of the Romans; comp. i 174 *vere rosam, frumenta calore, vites autumno fundi suadente videmus*.

741. *inde loci*: see n. to l. 443. *unā*: adverb.

742. Harvest being in summer, Virgil (Georg. i 66) speaks of *aestas pulverulenta*.

743. *autumnus*: the season of fruit and especially of the grape; Martial uses the word as='fruit', and also='wine'. *Euhius Euan*: both words (which may be retained in translating) are Greek names of Bacchus, and are derived from *εβοῖ*, the cry of the Bacchanals; comp. Eur. Bacch. 157 *εὔια τὸν εὔιον ἀγαλλόμεναι θεόν*.

744. *tempestates*, 'seasons'; so l. 1395.

745. *altitonans*, 'loud-roaring'. Voltumnus is the Greek Eurus and blew from the quarter where the winter sun rose, according to Seneca, Nat. Quaest. v 16 4.

746. *bruma* is contracted from *brevima* (= *brevissima*), 'the shortest day'. *pigrum*, 'numbing'; the word is used of *stagnant* water, and of a *sullen* expression.

747. *hanc* is governed by *sequitur*.

748. *certo tempore*, i.e. every day.

749. *rusus*=*rursus*.

751—770. *Eclipses of the sun may be explained by supposing that the moon shuts off his light from us; or else it may be some invisible body which gets between; or lastly the sun's rays may be quenched by passing through air that is hostile to them. And you have a similar choice of explanations to account for eclipses of the moon.*

751. *item quoque*: comp. *etiam quoque*, l. 604.

latebras, 'obscurations'.

754. *a terris*, 'on the earthward side', viz. of the sun; comp. *ab nervis* l. 1332.

caput is the moon's own head. *ei*, i.e. *solis*.

755. *caecum*, 'dark', 'opaque', not 'sightless'.

756. *tempore eodem* = *tamen*; so *interea*, ll. 83, 394.

aliud corpus is subject to *putetur*, *id* is object to *facere*.

putetur is after *cur*, l. 753; for the construction, see n. to l. 1045.

758. *languidus* must be taken as part of the predicate, as if the text were *languescere et dimittere*.

759. *recreareque*: the Augustan poets do not attach *que* to a short *e*.

761. *interstingui*, 'to be quenched for a time'; so *interquiescere*, 'to rest for a time'.

762. He proceeds to deal with lunar eclipses, giving first the true explanation and then two alternatives, all which he asserts to be equally probable. *vicissim*, i.e. as the moon hid the sun's light.

763. *et oppressum* etc.: 'and moreover herself to keep the sun suppressed', i.e. to prevent him from lighting up the moon. *super* = *insuper*.

764. *menstrua*, sc. *luna*, 'the moon in her monthly course'. *rigidas*, 'clearly defined'. *coni umbras*, 'the conical shadow', viz. of the earth; the gen. serves as an epithet; see nn. to ll. 369, 1193.

Lucr. seems here to say that the moon passes through the earth's shadow every month; this would only be true if the moon's path and the sun's were in the same plane, so that once in each month the three bodies would be in a straight line; see p. xxviii.

765. *tempore eodem*: see n. to l. 756. *succurrere*, 'to pass beneath'; usually, 'to help'.

766. *orbem*, 'orb'. The sun is supposed to be below the earth, at the time when the moon is eclipsed.

767. *quod* = *tale ut*. *radios*, sc. *solis*.

768. *et tamen*, 'and after all'; see n. to l. 1096.

770. *per* governs *loca*; *inimica* makes the separation less harsh.

propriis, i.e. not derived from the sun.

771—782. *Now that I have explained the motions of the heavenly bodies and their eclipses, I go back to describe the primeval earth and its first products.*

771. *quod superest*: see n. to l. 64. *caecula mundi*: *compuncta viai* l. 739.

772. *quicquid*: see n. to l. 131.

773. *cursus* is governed by *cieret*.

776. *quove*: see n. to l. 71. *offecto*: Lucr. elsewhere uses a personal passive of *officere*, though the verb does not take an acc.

777. *neque opinantes*: the common form is *necopinans*, in one word.

778. *lumine*, 'eye'; keeping up the metaphor of *conivent* and *convisunt*.

780. *nunc redeo*: the digression began at l. 509.

et mollia etc., 'and to the tender age of the fields of earth'.

781. Before *quid*, sc. *et doceo*. *luminis oras*: see n. to l. 85.

782. *crerint* (*creverint*)=*decrerint*; in l. 393 *cernere*=*decernere* in a rather different sense. Comp. Virg. Aen. xi 560 *quae nunc dubiis committitur auris*.

783—820. *The earth brought forth grass and trees first of all and then living creatures of all kinds. Neither sky nor sea had anything to do with the first creation of men; mother earth herself brought them forth, first birds, and then men who sprang from the earth and were fed by a moisture like milk, issuing from the ground. At that time there was no severe weather to trouble the first-created men.*

783. *principio*, 'in the beginning'.

785. *fulserunt*: this aorist, and others in the context, seem to imply that all this came to pass very quickly.

786. *arboribus*: for nom. Lucr. uses *arbusta*: see n. to l. 671. *variis*, 'of different kinds'.

787. *inmissis habenis*, 'with unbridled luxuriance'; the metaphor is imitated by Virgil, Georg. ii 364; comp. *ὄξυτέρῳ χαλιῶ*, Soph. Antig. 109.

788. *primum*, i.e. as soon as beasts and birds are born.

789. *pennipotentum*, 'of the strong of wing', i.e. birds; this is one of the many Lucretian compounds which Virgil did not care to use.

791. *inde loci*: see n. to l. 443. *mortalia saecula* here includes the lower animals as well as men, though it usually=*mortales* and excludes the *mutae pecudes et saecula ferarum*; so ll. 805, 988, 1169, 1238.

794. *terrestria* is not a mere epithet but=*quia terrestria sunt lacunis*, sc. *maris*.

795. *linquitur*: impers. Of the four elements one, fire, can have no claim, and Lucr. has dismissed the claim of two others; the only remaining hypothesis is that earth is the general mother.

796. *sit* belongs to *adepta* above; see n. to l. 90.

797. *existunt terris*, 'spring out of the earth'; comp. l. 69.

798. *concreta*: see n. to *cretus* l. 6. *vapore*: see n. to l. 236.

It was long believed that horse-hairs sealed up in a bottle of water became eels, but modern science seems to have exploded this theory.

800. *aethere*, sc. *novo*. *adulta* is neut. plur.

801. *alittum*: said to be a lengthened form of *alittum*, gen. plur. of *alēs*. *variae*, 'of different kinds'; but, Petron. 28, *pica varia*, 'a pied magpie'; Hor. Sat. i 8 42 *varia colubra*, 'a spotted snake'.

802. *exclusae*: comp. Hamlet 5 1 310 'the female dove, when that her golden couplets are *disclosed*'. The 'couplets' are the two young pigeons.

tempore: temporal abl.; so *aestate* below.

803. *teretes*, 'smooth and round'. Comp. iv 58, where Lucr. writes *tunicas* for *folliculos*.

804. *victum vitamque*, 'a living and life'. The two words are often so joined; see ll. 1080, 1105.

805. *tibi*, 'you must know'; ethical dat.; see nn. to ll. 260, 294.

mortalia saecula: see n. to l. 791.

807. *hoc*, 'therefore', lit. 'by this'; so τῷ is often used in Homer. *dabatur*, 'offered itself'.

808. *apti*, 'clasping'; particip. of *apisci*, to be distinguished from *aptus*, particip. of *apēre*, for which see n. to l. 537; the latter would govern a dative.

809. *aestus* is the heat inside the wombs caused by the growth of the infants.

810. *fugiens* and *petessens* ought strictly to be gen. plur.; the latter is an archaic frequentative from *petere*.

811. *ibi* is used for *ad eum locum*, i.e. *ad uteros*.

812. *cogebat*, sc. *terram*.

815. *impetus ille alimenti*, 'that current of nutriment'; *ille*, i.e. which served to feed the child before it was born.

817. *abundans* is feminine.

818. *ciebat*: here of second conjugation; see n. to l. 211.

819. *viribus*: abl. of description.

820. The children were feeble, but so were the winds and hot and cold weather.

821—836. *Thus mother earth gave birth to men and all kinds of*

animals and birds. But at length she ceased bearing, by the law of eternal change in all things; or at least the things which she bears now are no longer the same.

821. *etiam atque etiam*, 'again and again I say'.

823. *animal*: the only place where Lucr. uses the sing. of this substantive; he uses instead *animans* (fem.) and both *animalia* and *animantes* as plural.

825. *variantibus formis* = *varias*, the common epithet of birds; see n. to l. 801.

826. *debet*, 'she is bound'.

827. *spatio...vetusto*: so Aristophanes (Frogs 347) speaks of *ἐτη παλαιά*.

829. *ex alio*, 'after another'; comp. *ἐκ* in such phrases as *τυφλὸς ἐκ δεδορκότος*.

830. *sui* is gen. of the pronoun. *migrant*, 'change their place'.

831. *vertere* = *verti*; so *convertere* l. 1422, *turbare* l. 504, *mutare* l. 588, *volventia* l. 931, are all used intransitively.

833. *contemptibus*, 'its low estate'.

834. *mundi naturam*: see n. to l. 59.

835. *alter* is used for *alius*; comp. *autre* in French.

836. The full sentence is: *quod potuit ferre terra, nunc nequit ferre, ut possit ferre quod non tulit ante*; i.e., the earth ceases to bring forth certain things that it may be able to bring forth certain others.

837—850. *The earth gave birth also in the beginning to all kinds of monsters; but these were not fitted to exist and nature destroyed them before they came to maturity.*

838. *coorta* is neut. plur.

839. *androgynum*: usually *hermaphroditum*, a compound formed from the names of the two Greek deities.

interutrasque, i.e. *inter marem et feminam*; adv.; see n. to l. 472.

nec utrum = *non utrum* or *neutrum*; comp. Mart. v 20 11 *nunc vivit necuter sibi*. *nec* is an old form of negative; so *necopinans* (see n. to l. 777) = *non opinans*.

utrinque = *ab utroque*.

840. *partim* = *nonnulla*, 'some of them'; again, ll. 1083, 1143, 1310, in the same sense.

viduata simply = *sine*, like *privata*, l. 317. The gen. *manuum* instead of the abl. *manibus* is a Greek construction.

841. *voltu* = *oculis*.

844. *quod foret usus*, 'what they had need of'; *usus est* commonly takes abl., sometimes, as here, acc. of reference, 'that in respect of which there was need'; see n. to l. 1053.

847. *cupitum aetatis florem*: so in Pindar *εὐάνθεμος φῦά* and *τερπνᾶς καρπὸς ἦβας* express the same thing.

848. *per Veneris res*, 'in marriage'.

849. This is the only *hypermetric* line in Lucr.; i.e., its last syllable is cut off before the first of the next line; such lines are less rare in Virgil, but unknown to Homer.

rebus is dat. *commodi*.

850. *prōpagando* here, but *prōpagando* l. 856.

possint, sc. *res*. *procludere*, 'to continue'; the metaphor is from forging metal.

855—877. *Such wild animals as have not become extinct owe their preservation either to peculiar courage, craft, or speed; the lion, the fox, and the deer are familiar examples. The domestic animals owe their safety to our protection which we give because they are useful to us. All animals, which could not protect themselves and were useless to man, have become extinct.*

855. *animantum* = *animalium*; see n. to l. 823.

857. *vesci*, 'feed on'; for a different sense, see l. 72.

vitalibus auris, 'the breath of life'.

858. *aut denique*: comp. Hor. Sat. i 2 133 *ne nummi pereant aut puga aut denique fama*.

est goes with *tutata* below; see n. to l. 90.

859. *tutata reservans*: see n. to l. 109.

861. *manent*, 'continue to exist'.

863. *dolus*, sc. *tutatus est*.

864. *fido cum pectore*: see n. to l. 352. Dogs accompanied the kings in the Odyssey and the Aeneid, and the death of the faithful Argos is one of the most pathetic scenes in Homer (Od. xvii 290—327); Plato finds in the dog the qualities proper for the guardians of his ideal state (Rep. 376); comp. too Martial's epitaph (xi 69) on Dexter's dog, Lydia, *domino fidissima Dextro*.

865. *veterino*, 'burden carrying', connected by the Latin grammarians with *veho*; hence our 'veterinary'. *semine*: abl. of origin.

866. *bucerus* is *βουκέρω*s with Latin terminations.

869. *pabula parta*: acc., governed by *secuta sunt*.

labore, 'toil', viz. to get food; for we make them undergo other toil.

870. *praemia*, 'as reward'. *causa* (= $\chi\acute{\alpha}\rho\iota\tau\iota$) governs *utilitatis*.

871. *quis* is dat. plur. *horum*, 'of these qualities'.

872. *possent* is consec. subj.

873. *quare* = *quamobrem*.

874. *praesidio nostro*, 'under our protection'.

875. *scilicet*, 'you must know'; the original sense of the word, which is merely *sci licet*, lit. 'know! you are allowed'; comp. *ilicet*, *videlicet*. *praedae lucroque*: predicative datives; see l. 539.

876. The *vincla* are their own natural limitations which made it impossible for them to survive.

This 'survival of the fittest' is one of the central ideas of Darwinism.

878—924. *But there never were and never can be creatures which unite in one form the limbs and natures of two different animals. Take for instance the Centaur or man-horse: such a creature can never have existed, as the maturity of the horse coincides with the infancy of man and the maturity of man with the old age of the horse. So too of the Scylla, half-woman, half-fish, and of the Chimaera, a combination of the lion, goat, and dragon. It is true that the early world produced many things, but it never could produce creatures that combine two or more incompatible natures.*

879. *bino*, 'twofold'; the distributive *bini* is occasionally used in the singular as an adj. with this meaning. Comp. *unis* l. 897.

880. *compacta*, 'things put together', contains the subject to *queunt*.

881. *hinc illinc*, lit. 'from this, from that', i.e., 'from the two halves'.

non...potissit: i.e. *non potis sit satis par esse*, 'cannot be sufficiently alike'. *potissit* is subj. of *potis est*.

882. *licet*, sc. *tibi*. *hinc*, ἐκ τοῦδε, 'from what follows'.

883. *circum* is separated from *actis* by tmesis; see n. to l. 287. *impiger* is part of the predicate.

884. *haudquaquam*, sc. *floret*.

885. *ubera mammaram lactantia*, 'milk of the breast'.

886. *senecta* is an adj.

888. *tum demum*, τὸτ' ἤδη, 'only then'. *puero illi*, 'for that boy', i.e. the boy mentioned above.

890. *ne forte...credas*: see n. to l. 114. *veterino*: see n. to l. 865.

892. The Scylla is described by Homer (Od. xii 86—100); but he does not make her *desinere in piscem*, and all he says of dogs is that her voice was like that of a new-born puppy; but Catullus (60 2), Virgil (Aen. iii 426), and Ovid (Met. xiv 60), agree with the description of Lucr. *semimarinis*: i.e. the lower part of her body was that of a fish.

894. *discordia* is an adj.

896. *proiciunt*, sc. *robora*. See n. to *adicere*, l. 567.

897. *simili Venere*, 'with like passions'. *unis*: the plur. of *unus* is rare, as one might expect, but classical.

898. *conveniunt*: the impers. constr. is much commoner in this sense, *convenit vobis* or *inter vos*, not *convenitis*. *sunt*, sc. *eis*; a co-ordinate clause is substituted for a second relative clause; this is the normal construction in Greek; e.g. οὗτος δὲ εἶδον καὶ ἐκέλευσα αὐτὸν χάλπειν, 'whom I saw and to whom I said good-morning'. *per artus*, 'throughout their frames'.

901. *cum*, 'since'.

902. *genus omne*, 'any kind'.

903. *visceris*, 'of flesh'; in Lucr. this word, both sing. and plur., does not mean 'entrails', but all between the skin and bones; comp. Plaut. Mil. Glor. 30

per corium, per viscera,

perque os (the bone) *elephanti transmineret bracchium.*

904. *qui* is abl.: see n. to l. 233. *unā* agrees with *chimaera*, as do *prima*, *postrema* and *media* below.

905. *prima leo*, 'in front a lion'. *media ipsa*, lit. 'in the middle, itself,' i.e. a χίμαιρα or goat. The line is translated from Hom. Il. vi 181, πρόσθε λέων ὄπισθεν δὲ δράκων μέσση δὲ χίμαιρα. In the legend Bellerophon, the master of the horse Pegasus, killed this formidable creature.

907. The ablatives absolute go with *gigni*.

909. *novitatis*: gen. of definition; so *munere belli*, l. 1308.

911. *dicat*, sc. *licet*, 'may say'. *aurea* is part of the predicate, 'with gold'.

912. *arbusta*=*arbores*; see n. to l. 671. *suēsse* is contracted from *suevisse*.

913. *impete*, 'strength and size'; see n. to l. 200.

914. *pedum nisus ponere*, 'to tread firmly'.

916. *quod*, 'the fact that'.

918. *signi*: partitive gen., or gen. of divided whole; so *loci* in the phrase *inde loci*, *inde* being = *ab eo*.

919. *inter se* goes with *mixtas compactas*, 'formed into a single frame'.

921. *laeta*, 'luxuriant'; a constant epithet of *fabula* and *gramina*.

922. *complexa* is here passive, as *perplexa* always is, from *complecto*; *complecti* is commonly deponent.

923. *omnes*, sc. *res*.

925—987. *Men were much more hardy then than now. They did not know agriculture of any kind, but ate the acorns and berries which the woods supplied and drank the water of the mountain streams. They did not know the use of fire or of clothing, nor had they any idea of acting in concert with one another. They used to hunt wild beasts and sleep naked on beds of leaves. As they had always been accustomed to see night succeed day, they were not frightened by the darkness, but rather by the wild beasts which often drove them from their caves and beds of leaves.*

Bagehot, *Physics and Politics*, p. 15, says 'Perhaps it is the most valuable, as it is clearly the most certain result of prehistoric ethnology, that it has dispelled the dreams of other days as to a primitive high civilisation'. We see that Lucretius did not share those dreams.

926. *durius*, 'more hardy'. *quod* is the relative, and takes the subj. (*creasset*) because it = *quippe quod*.

927. *ossibus*, 'upon bones'; so *fundatum aevo* l. 161.

928. *aptum*, particip. of *ap̄ere*, agrees with *genus*.

viscera: see n. to l. 903. *nervis*, *νεῦποις*, 'sinews'.

929. Take *quod* (= *tale ut*) as first word in the sentence; *facile* is adv. modifying *caperetur*; for the order of words, comp. *nec facere ut possent* l. 843, and *nec ipsa sponte sua possent ut vivere* l. 871. This sense of *caperetur* is seen in such a phrase as *oculis captus*, 'blind'.

930. *labi*: see n. to *orbi* l. 74.

931. *volventia* = *volvenda* of l. 514; this particip. is often used as if *volvere* were intransitive; comp. the verbs quoted in n. to l. 831.

934. *scibat* is an archaic form for *sciebat* which the metre will not admit; so *accibant*, l. 996. Owing to the character of the narrative, there are a very large number of imperfects here; and the form in *-iebam* very often involves a cretic (- ~ -).

935. *defodere*, 'to dig down', hence 'to plant'. The line is repeated almost exactly, l. 1366.

936. *veteres* is opposed to *nova* in the line before.

938. *donum*, 'boon'.

939. *curabant corpora*, 'they would refresh their bodies', i.e. eat. *corporis cura* often includes exercise and the cares of the toilet; but these latter must have been unknown to the early men with their naked and squalid limbs. Comp. Hor. Sat. ii 2 80 *curata membra*.

942. *plurima*, 'in great number', is part of the predicate.

945. *sedare...vocabant*: the inf. after *vocare* is rare and poetical: Hor. Od. ii 18 38, *levare...vocat*.

946. *decursus aquai*: evidently a favourite phrase; comp. l. 263.

947. *claru'* is nom. sing. masc.; transl. by adverb.

948. *nota...silvestria*: see n. to *divina antiqua* l. 13.

templa, 'haunts'; see n. to l. 103. By the haunts of the nymphs he means wild rocky places.

949. *quibus e*: for the order, comp. *inimica per*, l. 770.

950. *lubrica* agrees with *saxa*. Notice the alliteration.

951. *umida saxa*: comp. ll. 298, 299; this kind of repetition is common in all poets; see especially M. Arnold's *Sohrab and Rustum*.

952. *partim*, 'some of the water'. *plano* is an epithet of *campo*. For *scatère* (which is governed by *scibant*, l. 949) see n. to l. 40.

953. *igni* is the archaic abl.; see n. to *orbi* l. 74.

954. *spoliis*, i.e. skins; *exuviae* is often used in this sense.

955. Comp. l. 992.

957. There is similar alliteration, l. 217.

958. *commune bonum spectare*, 'to consider the common weal', i.e. to take thought for the whole community.

959. *moribus*, 'customs'. *inter se* goes with *uti*.

Comp. Bagehot, *Physics and Politics*, p. 21 'rigid, definite, concise law is the primary want of early mankind'. The book is an excellent one to read together with this narrative of *Lucr.*; one is astonished to find how often the ancient poet agrees with modern science.

960. *quod praedae=id praedae quod*; *praedae* is gen. of divided whole, or partitive gen.; comp. *signi*, l. 918.

961. *sibi valere*, 'to be strong for himself', i.e. to use his strength for himself. *doctus*: participle.

964. *quamque*, sc. *feminam*.

965. *glandes, arbita, and pira* are in apposition with *pretium*.

968. *missilibus saxis*, 'with showers of stones'.

magno pondere clavae=*clavā magni ponderis*; comp. *levisomna canum corda*, l. 864.

970. *subiū*: dat. of *sus*, *suis*. *sic*=*sicut erant*, ὡς περ εἶχον, 'just as they were', 'without any previous preparation'. *silvestria membra*, 'their savage limbs'; *silvestria* is the same word as 'savage' coming through the Ital. *selvaggio*; so Milton speaks of a savage, i.e. wooded, hill.

971. *nuda dabant*: the MSS. have *nudabant*, which must be wrong, as Lucr. has just said that the men wore no clothes.

972. *circum* is the adverb.

973. For this idea, that the first inhabitants of the earth must have feared the sun would never rise a second time, see Blanco White's fine sonnet which begins:

Mysterious Night! when our first parent knew
Thee from report divine and heard thy name,
Did he not tremble for this lovely frame,
This glorious canopy of light and blue?

975. *respectabant*=*expectabant*; comp. vi 1233 *funera respectans*.

976. *dum...inferret*: see n. to *dum veniat*, l. 700.

977. *a parvis*, ἐκ παιδῶν, 'from childhood'.

979. *non erat ut fieri posset*=*non poterat fieri*; see l. 126. *mirarier* (= *mirari*) is used as a noun, and is subject to *posset*; so is *diffidere*; comp. Hor. Ep. i 7 27 *reddes dulce loqui, reddes ridere decorum*.

980. *diffidere*, 'misgiving'; followed by acc. and inf., l. 1157.

982. *curae* (sc. *eis*) is predicative dat., like *oneri* l. 539.

983. *infestam* is predicate. *quietem*, 'their time of rest'; *per quietem*, 'in sleep', is a common phrase in Suetonius; or perhaps 'their place of rest'; as Lucr. (i 405) speaks of *intectae fronde quietes*.

985. *adventu*=*propter adventum*; causal abl.

986. *intempesta nocte*, νυκτὸς ἄωπλ, 'at dead of night'. The epithet is thus explained by Varro, a contemporary of Cicero and the most learned of the Romans: *cum tempus agendi est nullum*.

987. *hospitibus saevis*: i.e. the boars and lions.

988—1010. *Men did not die then in much greater numbers than now.*

It is true that more men were seized and devoured by wild beasts, and those who escaped with wounds did not know how to cure them; but no great armies or fleets perished in a single day. The sea was

not a source of death as no one ventured upon it. *Want may have killed some, as luxury does now; and some swallowed poisons unawares which we now use as medicines.*

988. *nimio plus*, 'more by much'; it commonly means 'too much', as in Hor. Od. i 33 *ne doleas plus nimio. mortalia saecula*: see n. to l. 791.

989. *labentis*, 'ebbing'; for the alliteration and also for the matter, comp. Gray's 'nor cast one longing lingering look behind'.

990. *magis*, sc. *quam nunc*.

991. *haustus*, 'torn', a rather strange but quite common use of *haurire*; comp. ll. 1069, 1324.

993. *vivo busto*, i.e. the animal's maw. *viscera*: see n. to l. 903. Notice the alliteration, which has a pathetic effect.

996. *accibant*: see n. to *scibat* l. 934. *Orcus* or *Dis* is the Latin deity who corresponds to *Πλούτων*, the god of the lower world.

997. *donique*: see n. to l. 708; the plpf. after *donec* is unexampled in Lucr. *vermina*, 'gripings'.

998. *vellent*, 'needed', viz. for cure.

999. *virum*: gen. plur. *sub signis ducta*, 'marching beneath their standards'. *milia* should always be spelt with one *l*, the rule being that when a long vowel is followed by *ll*, one *l* is withdrawn where an *i* follows, (unless this *i* be merely the mark of a case, e.g. *villa villis*); so *mille* but *milia*, *villa* but *vilicus*, *Messalla* but *Messalina*.

1000. Comp. l. 95.

1002. *hic=tum*; so l. 432. *temere incassum frustra*, 'without aim, purpose, or result'; a very pleonastic expression, as all three words express nearly the same idea.

1003. *sacvibat*: see n. to *scibat*, l. 934.

1005. *in fraudem*, 'to his hurt'; this sense of *fraus* is common in old legal formulas where *sine fraude esto*=*ἀθῶρον εἶναι* in Greek laws. *videntibus*: so Aesch. Prom. 89 *ποντίων τε κυμάτων ἀνήριθμον γέλασμα*.

1006. *improba ratio*, 'the reckless art'. *caeca*, 'hidden'.

1007. *tum deinde*, 'at that time too'.

1008. *contra*: adverb. *mersat*, sc. *membra*.

1009. *inprudentes*, *ἄκοντες*, 'unwittingly'; comp. Virg. Georg. ii 152 *nec miseros fallunt aconita legentes*.

1010. 'now doctors prescribe and administer it with more skill'. The reading in the text is that of Professor Palmer for *nudant sollertius*

ipsi of the MSS. All medicines are poison; and Lucr. is contrasting the skill of doctors, in graduating a dose of what would be fatal in large quantities, with the ignorance which led uncivilised men to poison themselves. *dare* and *uti* are both technically used of doctors. From *διδόναι*, which is used like *dare*, comes our 'dose'.

1011—1027. *Next they came to use huts, skins, and fire which softened their bodies, while family life and the caresses of children made them less harsh and cruel. The next step was friendship among neighbours, and agreements which, if not in all cases, at least in many, were respected.*

1011. *ignemque*: the discovery of fire is described in detail below (ll. 1091—1104); after finishing his first sketch of the narrative, Lucr. seems to have thought more should be said on so important a subject. Darwin says 'the discovery of fire, probably the greatest, excepting language, made by man, dates from before the dawn of history'.

1012. The line in italics was written by Munro to supply the place of a lost line of the original.

lecti socialia iura, 'the binding ties of wedlock'.

1014. *primum* is an adverb.

1015. *curavit*=*effecit*; often so used by Lucr.

1016. *non ita iam*, οὐκέτι ὁμοίως, 'no longer as before'. *non iam*=οὐκέτι, *nondum*=οὐπω.

1018. *ingenium fringere superbum*, 'broke down the haughty temper'.

1020. *inter se* goes with *iungere*. Compare the account given in Plato (Rep. 358 E) of the origin of justice: δοκεῖ λυσitteλεῖν ξυθέσθαι ἀλλήλοις μήτ' ἀδικεῖν μήτ' ἀδικεῖσθαι.

1021. *commendarunt*, sc. *homines* supplied out of *finitimi*; 'men asked protection for'.

1022. *balbe*, 'stammeringly', properly applies only to the *pueri*; comp. Hor. Ep. ii 1 126 *os tenerum pueri balbumque*. *significarent*, sc. *pueri et mulieres*.

1023. *imbecillorum*: *misereri* takes a genitive, *miserari* an accusative.

1024. *omnimodis*, 'without exception'; for the formation of the word, see n. to l. 190.

1025. *bona magna*=*bene magna*; comp. *pleno bene*, l. 708. *caste*=*intemperate*.

1026. *aut*, 'or else'. *iam tum*, 'thus early'.

1027. *prōpago*: nom. sing.; for quantity of verb, see n. to l. 850.

1028—1090. *Language arose from a natural instinct to denote different things by different names. Children try to speak before they are able to do so, just as young animals instinctively exert their peculiar powers. It is not true that some one man invented the names of things and taught everyone else; no single man could have conceived such an idea, nor would others have been willing to learn from him. There is nothing in the origin of language to surprise us, if we reflect that even animals express different emotions in quite different tones; this may be observed in dogs, horses, and birds of many kinds.*

This question was much discussed by the ancients, whether the names of things were arbitrarily fixed or arose naturally, whether they were due to *θέσις* or *φύσις*. The view of Lucretius is shared by Darwin.

1029. *mittere, λέγειν*, 'to utter'; the inf. after *subegit* is unusual for *ut* and subj., though normal after *cogere*. *utilitas* seems to be used like *χρεία*, in the sense of 'need'. *expressit*, 'wrung out of them'.

1030. Comp. l. 460. *videtur* is passive.

1031. *infantia*, 'inability to speak', the original meaning of the word; so *infans*, l. 223.

1033. *vim*: the acc. after *utor* and its compounds and such verbs as *fruo*, *fungor*, *potior*, is an archaism.

quoad (= *quatenus*) is one syllable by *synizesis*.

abuti=*uti*; comp. ἀποχρησθαι. *abuti* often = καταχρησθαι.

1035. *illis*, i.e. *frontibus inermibus*. *petit*: comp. Hor. Sat. ii 152 *dente lupus, cornu taurus petit*.

1036. *σκόμμοι* is the Greek equivalent of *catuli*.

1037. *iam tum*: as in l. 1026.

1039. *alituum*: see n. to l. 801.

1040. *tremulum*, 'fluttering'.

1041. *aliquem*, 'some one man'.

1042. *inde*=*ab eo*, 'from him'.

1045. *tempore eodem*=*tamen* and goes with *putentur*, not with *facere*; comp. ll. 756, 765, where the construction is exactly the same, being *asyndetic*, i.e. there is no particle (such as *sed*) to connect the two contrasted verbs, *posset* and *putentur*.

1047. *notities*, 'pre-conception', is a translation, not very accurate, of *πρόληψις*: see n. to l. 182.

1049. Comp. l. 183. *scirēt*: the last syllable can be lengthened because it is in *arsis*, i.e. the emphasis falls on it; in hexameters the *arsis* is on the first syllable of each foot; so Virgil ends a line with *gravidus autumno*, and begins one with *liminaque laurusque*.

1050. *victosque domare*: see n. to l. 109.

1053. *quid sit opus facto*, lit. 'in respect of what there is need of doing', i.e. 'what is needful to be done'; *opus est* usually takes the abl. of a noun; but, if the thing needed be an action, the abl. of a perf. particip. is used. For the acc. *quid*, see n. to *quod foret usus* l. 844. *neque enim*: see n. to l. 315.

1054. *amplius*, 'continually'. *aures* is governed by *obtundere*, *sonitus* by *ferrent*.

1056. *tantoperest*: see n. to l. 29.

1057. *vigeret* is subj., because *cui* = *quippe cui*.

1059. *cum*, 'since'. *denique* may here be translated 'even'.

1061. *est*, sc. *eis*. *gliscunt*, 'are rife'; comp. iii 480 *iurgia gliscunt*, Plaut. Capt. 558 *gliscit rabies*.

1062. *quippe etenim*: see n. to l. 126.

1063. *magna...mollia*: see n. to l. 13. *Molossum*: gen. plur.: the Molossi were a tribe in Epirus who possessed a very famous breed of large dogs.

1064. *rieta*, 'open mouths'; *rictus*, -ūs is the common form of the word. *fremunt*, 'growl'.

1065. *rabie restricta*, 'drawn back in rage'; comp. Plaut. Capt. 485 *ne canem quidem inritatam voluit quisquam imitarier, saltem, si non arriderent, dentes ut restringerent*.

1066. *et*, 'than', is for *atque* or *ac* after *alio*; *ac cum* would not sound well. *iam*, 'actually', qualifies *latrant*. *omnia*, 'all the place'.

1068. *pedibus* goes with *iactant*.

1069. *suspensis*, lit. 'carefully balanced', i.e. gentle; comp. *suspensio pede*, 'on tiptoe'. *imitantur haustus*, 'they pretend to bite'; *teneros* is part of the predicate, and may be transl. by an adv.

1070. *adulant* = *σαλvouσι*.

1071. *et* is used after *alio* as in l. 1066, 'other than'.

1072. A graphic description. *plorantes* is nom. plur.

1074. *iuvenus* is used as an adjective.

1075. *pinnigeri...amoris*: comp. l. 737 *Veneris praenuntius pennatus*

1077. *et*: see n. to l. 1066. *sic*, 'casually'; *ὀνρωσι* is similarly used: the *sic* of l. 970 is rather different. *alias* is the adverb.

1078. Comp. l. 801, and see nn. there.

1080. *salsum* is used as a noun; comp. *tranquillum*, l. 12.

victum vitamque: see n. to l. 804.

1081. It seems very probable that a line is lost after *voces*; 'they utter different cries at different times' is a sentence complete in itself, which cannot be properly connected with the following line. The lost line may have begun with *et quom*, (which would account for its disappearance), and have described some peaceful cry of sea-birds: e.g. *et quom progeniem parvam nidosque revisunt*.

1083. *partim*, 'some birds'; see n. to l. 840. *tempestatibus*, 'the weather'. *una*: adv.

1087. *sensus*, 'feelings'.

1088. *tamen* is out of place, as it really goes with *emittere*; *δμῶς* is sometimes similarly placed, e.g. Aesch. Theb. 699 *πελθου γυναιξίν κατπερ οὐ στέργων δμῶς*.

1091—1104. *Men may have got fire first from the lightning or from the rubbing of trees against one another; they learned to cook their food by observing the effect of the sun's heat upon things growing in the fields.*

It is evident that this paragraph and the two which follow are subsequent additions of the poet: they do not fit in properly here and are inconsistent with what goes before and comes after; see n. to l. 1011.

1091. *in his rebus*, 'herein'; so l. 247. *ne forte requiras*: see n. to l. 1114.

1092. *ignem*: see n. to l. 1011.

1093. *inde* = *ab eo*, i.e. *a fulmine*.

1095. *fulgēre*: see n. to *scatit*, l. 40. *caeli plāga* must be distinguished from *ponti plāga*, l. 481.

1096. *et...tamen*, 'and all the same', i.e. if we leave the lightning out of account, there is another explanation to our hand; *et tamen* is thus used, ll. 213, 768, 1125, 1177. *cum*: conjunction.

1097. *aestuat*, 'is tossed'.

1100. *mutua* is used as an adv., like *acerba*, l. 33; Virgil (Aen. vii 66) uses *per mutua*. *dum*, 'as', is causal, as often with pres. ind.

1101. *utrumque*, i.e. either lightning or the friction of trees.

1102. *inde*, 'next'.

1103. Supply *mortales* as object to *docuit*, and again as subject to *videbant*.

1105—1135. *Day by day men acquired civilisation by the teaching of the most intelligent among them. Kings built cities and divided property. At first beauty and strength were highly regarded, but these had soon to give way to wealth, though the philosopher despises riches. Men struggled for honour and wealth and often came to ruin in the struggle; let them continue along that dangerous path, as they will not judge things for themselves but are content to accept the estimate of others.*

The finest poetry in the book, perhaps in the poem, is contained in this paragraph and the three following.

1105. *hi* is the antecedent of *qui* in l. 1107. *victum vitamque*: see n. to l. 804.

1106. *rebu'* is abl., the Latin idiom being, to change one thing with another; the abl. is instrumental. *benigni* may be translated by an adv.

1107. *corde vigeabant*, 'were of vigorous understanding'; *cor* is commonly the seat of intellect rather than of affection; see l. 882.

1109. *praesidium* may be 'a place to rule in', the original meaning from *praesidere*; *perfugium*, 'a place to take refuge in'.

1111. *pro facie cuiusque = cuique pro facie; facies*, 'beauty'.

1113. *res*, 'wealth'. *inventast*, 'was devised'; *repertum*, 'was discovered', viz. in the earth.

1115. *sectam sequuntur*, 'follow in the train'.

1116. *creti*: see n. to l. 6.

1117. *quod* is the conjunction; see n. to l. 134.

1118. *vivere parce* is the subject of the sentence; the verb *sunt* is plur. by attraction due to the plur. predicate *divitiae*.

1119. *neque enim*: see n. to l. 315. *parvi* is used as a noun; 'for never is there lack of a little'; i.e. you can always get a little, if you are content with that.

1120. *claros voluerunt se*: comp. Hor. Sat. i 1 84 *non uxor saluum te vult*. We use this constr. more with a particip. than an adj.: 'I wish myself dead', but 'I wish to be famous'.

1122. *opulenti*, 'by their wealth'.

1123. *succedere*, 'to mount up'; in a different sense, l. 286.

1124. *iter viai*: comp. *cursus viam*, l. 714.

1125. *et tamen*, 'and after all', i.e. even if they reach it; see n. to l. 1096.

deicit ictos: see n. to l. 109.

1126. This *invidia* bears some resemblance to the Nemesis, or envy of the gods, in the old mythology which Lucr. utterly discards; but see n. to l. 1233.

Tartara taetra, 'noisome Tartarus'; the infernal regions are mentioned to suggest the distance and disastrous nature of the fall.

1127. *vaporant*, 'are blasted'; the verb is usually active.

1128. *quae* and *cumque* make up a single word.

1129. *iam* emphasises *multo*; so ἤδη is used with adjectives.

1130. *regere imperio res*: comp. Virg. Aen. vi 851 *tu regere imperio populos, Romane, memento*.

1131. *sine...sudent*: *sine* is pres. imperat. of *sinere*: comp. Plaut. Mil. Glor. 54 *sivi viverent*, 'I spared their lives'. *sanguine sudent*: so in French, *suer sang et eau*, 'to exert oneself excessively'.

1133. If men did not follow one another like sheep, they would see that the objects they pursue are not worth having. *sapiunt*, 'men get their knowledge'.

1134. Comp. Hor. Ep. i 16 19 *vereor ne cui de te plus quam tibi credas*.

1135. Ambition is no new thing, says Lucretius.

1136—1160. *Thus kings were slain, and anarchy prevailed until magistrates were appointed and codes of law drawn up. Men submitted more readily to the restraints of law, because the former system of unlimited revenge gave birth to feuds which poisoned all the peace and happiness of life.*

1136. Kings were slain because their greatness attracted the stroke of envy as has just been said. Perhaps Lucr. is thinking of the expulsion of kings from Rome, and below (ll. 1143, 1144) of the consuls and decemvirs.

1137. Comp. Shirley's Ode:

Sceptre and crown must tumble down,

And in the dust be equal made

With the poor crooked scythe and spade.

1138. *insigne*, i.e. the crown; used as a noun, as in l. 700.

cruentum is part of the predicate, 'in blood'.

1139. *honorem*, 'prerogative'.
1140. *metutum*: nom. sing. neut. of the rare participle of *metuo*.
1141. 'So things were brought to uttermost degradation and disorder'. *res*, 'the state of things'; so *αὐτὰ* is used by Thucydides. *redibat* is a part of the idiom and does not mean 'were brought back'; comp. *revocatur*, l. 255, and iii 910 *ad somnum si res redit atque quietem*.
- turbæ*, 'disturbance', is common in Plautus.
1143. *partim* = *nonnulli*; see n. to l. 840.
1144. *constituere* is not infinitive. *vellent*: final subj.
1145. *defessum colere* is a rare constr. for *defessum colendo*.
1147. *arta*, 'stringent'; the opposite of *artus* is *laxus*, 'roomy', 'large', 'indulgent'.
1148. *ex ira*, 'from rage'.
1150. *colere avom* = *vivere*, as in l. 1145.
1151. *inde* = *ab eo*, i.e. from excessive revenge. *praemia*, 'prizes', 'valuable things', not 'rewards'; see ll. 5, 1450.
1152. *quemque*, i.e. all who commit violence and wrong.
1153. *unde* = *a quo*. Comp. Hesiod Op. 265 ὁ αὐτῷ κακὰ τεύχει ἀνὴρ ἄλλω κακὰ τεύχων, perhaps the earliest classical equivalent of our proverb that honesty is the best policy.
1154. *degere*, sc. *eum*.
1156. *divom genus*: yet Epicurus and consequently Lucr. taught that the gods take no notice of the good or evil actions of men; see *Introduct.* p. xxv.
1157. *perpetuo* goes with *fore clam*; *id* is 'his guilt'; *clam* would be *occultum* in prose; comp. Cic. De Fin. i 50 *quamvis occulte fecerit, numquam tamen id confidet semper occultum fore*.
1158. *quippe ubi*, 'since'; *quia*, *quod*, *cum*, and *quando* are often preceded thus by *quippe* without its seeming to affect the sense.
1159. *protraxe*: contracted from *protraxisse*.
1160. *in medium dedisse*, 'to have published abroad'.
- 1161—1193. *It is easy to account for that fear of the gods which has covered the earth with temples and rituals. Men saw, when awake and still more in sleep, beings of wonderful size, beauty, and strength. As these were ever present, and seemed exempt from fear of death, men attributed to them immortality and perfect happiness, and made them to dwell in the sky, not being able otherwise to account*

for the order of the seasons and the other wonders they beheld in the heavens.

1161. *deum*: gen. plur. *magnas gentes*: see n. to l. 20.

1162. *pervulgarit*: the indirect question depends on *rationem reddere*, l. 1168.

1163. *sollemnia sacra*, 'fixed ceremonies'; this is the original meaning of *sollemnis* which is connected with *annus*; 'solcmn' being a secondary meaning.

1164. *săcra*, but *săcra* above; so iv 1259 *liquidis et liquida crassis. rebu'*, 'occasions'.

1165. *unde*=*a qua causa*; see l. 1161.

1166. *toto orbi*, 'over all the earth'; so *aethere toto*, l. 398.

1167. *cogit*, sc. *mortales*. *celebrare*, 'to throng them'; see n. to l. 1381.

1168. *non ita difficile*, 'not very difficult'; so *non ita pridem*, 'rather lately'. This line may be taken first in translating the sentence.

1169. *quippe etenim*: see n. to l. 126.

divum goes with *facies* below.

mortalia saecula: see n. to l. 791.

1170. *animo vigilante*, 'with waking mind', i.e. when awake. Lucr. seems to be inconsistent here: for he said before (l. 148) that the nature of the gods was too fine and impalpable for our senses to perceive it. Comp. also vi 68—78.

1171. *magis*, sc. *videbant*.

1173. For the idea that the gods ought to utter lofty words suitable to their beauty and power, comp. the defence Aeschylus is supposed to make for his long words, Aristoph. Frogs 1060

κάλλως εἰκὸς τοὺς ἡμιθέους τοῖς ῥήμασι μείζουσι χρῆσθαι,
καὶ γὰρ τοῖς ἱματίοις ἡμῶν χρῶνται πολὺ σεμνοτέροισιν.

1175. *dabant*, sc. *deis homines*.

1176. There was no time when these splendid visions ceased to appear; consequently men believed that the beings seen were immortal.

1177. *et tamen*, 'and without that'; i.e. even if the visions had ceased to appear. *omnino*, 'on general grounds', repeats the same idea. *viribus auctos*: see n. to *ignibus aucta*, l. 723.

1178. *convinci*=*vinci*; so Shakespeare, Macbeth I 7 64 'his chamberlains will I with wine and wassail so *convince*', i.e. overcome.

1179. *fortunis*, 'in happiness', the usual meaning of the plur. in Lucr. ; comp. i 106 ; in Cicero *fortuna*e often = 'wealth'.

1180. *vexaret* is the subj. of a reported reason ; comp. Cic. Off. ii 22 *laudat Panaetius Africanum quod tam abstinens fuerit*.

1181. *multa et mira*, πολλά καὶ θαυμαστά. *videbant efficere*, 'men saw the gods do'.

1182. *ipsos* is rather strangely used to contrast the easy performance of the gods with the difficulty of the tasks. *inde* = *ab efficiendo*. Compare the address to Iacchus, Aristoph. Frogs 400 δέϊξον ὡς ἀνευ πόνου πολλὴν ὁδὸν περαινέεις.

1183. *caeli rationes*, 'the system of heaven' ; in a rather different sense, l. 196.

1186. *perfugium sibi habebant*, 'they had recourse to', 'they took refuge in' ; *perfugium* is acc. in apposition with *tradere* and *facere*, which are both used as nouns and governed by *habebant*.

1188. *deum*: gen. plur. *templa*, 'realms', not 'temples' ; see nn. to ll. 103, 948. Epicurus (see n. to l. 147) taught that the gods did not live in the heavens but in spaces between worlds, μετακόσμια, which Cicero translates by *intermundia*.

1189. *videtur*, 'is seen'.

1190. *severa*, 'austere', denoting the purity and coldness of the starlight ; Keats speaks of 'the earnest stars'. The whole line is quoted by Bentley (Phalaris ix) as an example of expression at once simple and sublime.

1191. *faces*, 'meteors'.

1193. *fremitus*, 'growlings', viz. of thunder ; comp. *fremunt*, of dogs, l. 1064.

murmura minarum, 'threatening rumblings' ; the gen. serves as an epithet ; for examples see ll. 369, 764. It is akin to the gen. of definition, for which see l. 909.

1194—1240. *Men have made themselves miserable by imagining that the gods rule in heaven and are capable of anger. True piety consists not in superstitious rites but rather in a mind at peace. It is true that when we behold the wonders of the sky, we begin to doubt whether they may not be due to the power of the gods ; and the dreadful thunder causes all men and especially the sinner to tremble for fear of punishment. So every captain prays the gods to deliver him from the perils of the sea, and often his prayer is unavailing.*

The perils to which greatness is subject, and destructive earthquakes—all these things make it natural that men should think little of their own power and magnify that of the gods.

1194. *genus* is probably accus.; comp. ii 14 *o miseris hominum mentes, o pectora caeca!*

1195. *adiunxit*, 'gave also'; comp. ii 604 *adiunxere feras*.

1197. *minores nostri*, 'our posterity', just as *maiores nostri* = 'our ancestors'.

1198. *velatum*: the Romans prayed with the head covered, the Greeks with it bare. *videri* is passive.

1199. *vertit ad lapidem*, 'to turn towards a stone', a satirical description of the way in which Romans approached the image of a god: after praying they turned to the right, so as to front the image, and then prostrated themselves; comp. Plautus, *Curcul.* 69 A. *quo me vertam nescio*. B. *si deos salutas, dextroorsum censeo*; Plutarch, *Camill.* 5 *καθάπερ ἐστὶ Ῥωμαῖοις ἔθος ἐπευξαμένοις καὶ προσκυνήσασιν ἐπὶ δεξιὰ ἐξέλτεται*. Plutarch makes the prostration come before the turn.

lapidem seems a contemptuous word for a statue; or it may refer to the *termini* (boundary-stones) which were worshipped by the Romans.

1202. *votis nectere vota*, 'to link vow on to vow'; it is probable that *nectere* is not metaphorical, *vota* being = *votivas tabellas*.

1203. *mage* is a weakened form of *magis*; see n. to *potis*, l. 1.

1205. *templa*: see n. to l. 103, and comp. Aesch. *Pers.* 367 *τέμενος ἀλθέπος*. The order is: *et aethera fixum super micantibus stellis*. *Lucr.* seems here to take the view that the sky does not revolve.

1206. *venit in mentem viarum*: this *impers. constr.* followed by the *gen.* is found in Cicero, e.g. *De Fin.* v 2 *venit mihi in mentem Platonis*, 'I think of Plato'; this *gen.* may be compared with that after *reminiscor* and *obliscor*.

1207. *oppressa*: acc. plur. neut.

1208. *caput erigere*: so *ἀνακύπτειν* is often used metaphorically.

1209. *nequae* depends on *cura* which = *metus*.

nobis: the ethical dat.; see ll. 260, 294, 805; 'that we may haply find there is'.

1210. *verset*: consec. subj., *quae* being = *talis ut*.

1211. *rationis egestas*, 'the difficulty of explaining'.

1212. *ecquaenam*: the indirect question depends on *rationis*.

1213. *quoad*: see n. to l. 1033.

1214. *solliciti* agrees with *motus*. *laborem*, 'strain'.

1215. *salute*, 'existence'; so *salvo Marone*, 'while Virgil lived'.

1217 is identical with l. 379.

1218. *cui* is interrogative.

1219. *contrahitur*, 'shrink into itself'; just the opposite is *animus diffunditur*, 'expands with joy'.

correpunt, 'huddle up'; like *contrahitur*, but stronger. Comp. Seneca Nat. Quaest. vi 2 *quid dementius quam ad tonitrua succidere et sub terram correpere fulminum metu?*

1221. *murmura*, viz. of thunder.

1223. *corripiunt membra*, 'shrink into themselves'; comp. *contrahitur*, *correpunt* above.

1225. *poenarum solvendi*: we should expect either the gerund, *poenas solvendi*, or the gerundive, *poenarum solvendarum*; but sometimes, as here, the gen. of the gerund is followed by a noun in the gen., apparently to avoid such cumbrous phrases as *agrorum condonandorum*; comp. Plaut. Capt. 852 *nominandi istorum copia*, *ibid.* 1008 *lucis tuendi copiam*. *grave* is an epithet; *sit adultum* (see n. to l. 90) is the verb; comp. l. 1416.

1227. *induperatorem*: see n. to l. 102.

1228. *pariter* should be taken before *cum*.

1229. *divum pacem*, 'the favour of the gods'; comp. *ventorum paces* below, 'propitious winds'.

1230. *animas*: see n. to l. 236. So Jason, when starting on the quest of the golden fleece, *Ζῆρα καὶ ὠκυπόρου κυμάτων ῥιπὰς ἀνέμων τ' ἐκάλει, νύκτας τε καὶ πόντου κελεύθου ἀματὰ τ' εἴφρονα καὶ φιλλαν νόστοιο μοῖραν* (Pind. Pyth. iv 194); and the Athenians, when starting against Syracuse, *εὐχὰς τὰς νομιζομένας πρὸ τῆς ἀναγωγῆς ἐποιούντο* (Thuc. vi 32). And in the last case the prayers were unheard.

1232. *nilo*, abl. of amount of difference, goes with *minus*.

vada leti, 'the shoals of death'; the phrase is hardly a metaphor in the sense that *ianua leti* (l. 373) is.

1233. The 'hidden power' is the secret working of nature, the *fortuna* of l. 107, the *invidia* of l. 1126.

1234. The rods and axes were the insignia of the highest offices and are therefore used as = 'greatness'.

1235. *ludibrio*, lit. 'for a mockery'; predicative dat.

1237. *dubiaeque*: *que* is used in the sense of *ve*; *ve* was used for *que*, l. 71; *dubiae* may be transl. by an adv. Comp. Seneca Nat. Quaest. vi 1 2 *oppidi pars ruit dubieque stant etiam quae relicta sunt*. He is

speaking of the eruption and earthquake which destroyed Pompeii and Herculaneum in 79 A.D.

minantur, sc. *se casuras esse*.

1238. *mortalia saecula*=*homines*; see n. to l. 791.

1239. *relinquunt*, 'admit'.

1240. *gubernent*: consec. subj., *quae* being=*tales ut*.

1241—1280. *Metals were first discovered when the earth was thoroughly heated by forest fires, which may have been kindled by lightning or by men for various purposes. The heat melted the metals in the ground; and when these had cooled, their glitter attracted attention, and the shapes they had assumed suggested to men that they might smelt metals for their own purposes. Gold and silver did not prove so workable as copper and so were neglected for it. Just the opposite is true now. Everything has its day.*

1241. *quod superest*: see n. to l. 64.

1242. *argenti pondus*, 'heavy silver'; so *terrae pondus*, l. 495. *potestas*, 'the substance'.

1244. *fulmine*: the abl. may be either causal or absolute.

1246. *formidinis ergo*, 'for the sake of (i.e. to inspire) terror'; an archaic use of *ergo*, found once in Virgil, *Aen.* vi 670.

1248. *pandere*, 'to clear', $\psi\iota\lambda\omicron\upsilon\nu$; $\psi\iota\lambda\eta\ \gamma\eta$, arable land, is opposed to $\pi\epsilon\phi\upsilon\tau\epsilon\upsilon\mu\acute{\epsilon}\nu\eta$, land for olives and vines.

pascua, 'fit for pasture', is predicate.

1250. *venarier* (= *venari*) is used as a noun and is the subj. to *ortum est*.

1251. *saepire*, sc. *ortum est*.

1252. *quidquid id est*: see n. to l. 577.

1255. *venis*: abl. of place whence.

1257. *cum videbant*= $\delta\pi\omicron\tau\epsilon\ \epsilon\delta\omicron\iota\epsilon\nu$; but later writers imitate Greek usage in these general conditions in past time, as *Mart.* ii 69 4 *cum cenaret* (= $\delta\pi\omicron\tau\epsilon\ \delta\epsilon\iota\pi\nu\omicron\lambda\eta$), *erat tristior ille, domi*.

1259. *lepore*, 'prettiness'.

1260. The order is: *et videbant (ea) formatâ esse figurâ simili atque vestigia lacunarum (quae) cuique (metallo) fuerant*.

1261. lit. 'as the outlines of the hollows had been to each', i.e. 'to the outline of the hollow in which each (lump) had been'; *similis* is followed by *atque*, just as $\delta\mu\omicron\iota\omicron\varsigma$ by *kal*.

1262. *penetrabat eos*, 'it struck them'; a rare use of the word. *liquefacta...decurrere*: see n. to l. 109.

1264. *prorsum*, 'absolutely', qualifies *quamvis in acuta*.

quamvis in acuta: the whole phrase is: *in fastigia tam acuta quam vis*. The plur. of *quamvis* is sometimes used, and also the plur. of other tenses, e.g. in speeches to a jury, *quam voletis multos producam testes*.

1265. *mucronum fastigia*, 'tapering points'.

procludendo, 'by hammering out'; there is a change of subject, as it is not the metals but men that do the hammering. Comp. l. 1369, and i 312 *anulus in digito subter tenuatur habendo*, i.e., 'by our wearing'. In these constructions the gerund is not passive, as is sometimes said; see n. to *novando*, l. 194.

1266. *darent*, sc. *hae res*, the metals. *possent*, sc. *ipsi*.

1267. *levia* is predicate.

1268. *pertundere*: this compound takes the sense of the preposition rather than of the original verb; *pertusum vas*, 'a jar with a hole in it'; *pertusa laena*, 'a coat in holes'. *perque forare*: a case of tmesis.

1269. *argento*: abl. of instrument.

1270. *primum* goes with *parabant* above. *violentis*, 'masterful'; the epithet hints at the uses to be made of copper.

1271. *potestas*, sc. *argenti et auri*.

1272. *pariter*, i.e. as well as copper.

1275. *iacet*, 'is neglected', a common sense of the word; *iacere* is opposed to *valere*, Cic. Off. iii 46.

successit: see n. to l. 1123.

1276. *volvenda*: see n. to l. 514. *tempora rerum*, 'the seasons of things'.

1278. Comp. ll. 832, 833.

1281—1307. *The first weapons used were the hands, nails, and teeth, sticks, stones, and fire. These gave place to copper which was used for all purposes of war and peace until copper in turn gave place to iron. Next men learnt to mount horses in warfare and then to yoke two and four horses in a chariot. Lastly the Carthaginians taught elephants to take part in battle. Thus gradually the means of fighting have been perfected.*

1281. *ferri natura*, 'the substance which is iron', is a mere periphrasis for *ferrum*; see n. to l. 59.

1284. *silvarum fragmina* is in apposition with *rami*.

1285. *postquam primum*=ἐπεὶ τὰχιστα; *quom extemplo* is the usual phrase in Plautus. *cognita* is neuter, according to rule, after the two subjects *flamma atque ignes*, of which one is masculine and one feminine, both referring to things not persons.

1287. *prior*: adj. for adv.

1288. *quo*, like ὅσῳ, often = 'because', when the sentence contains a comparative. *facilis*, 'easy to work'. *naturā*: nom.

1290. *miscabant*, 'they stirred up'. *vasta*, 'gaping'. *serebant*, lit. 'they sowed', i.e. 'dealt around'.

1291. *ollis*: archaic for *illis*.

1294. *species, eîdos*, 'the fashion'. *est* belongs to *versa*; see n. to l. 90.

1296. Those who first used iron swords had a great advantage over the rest; but when everybody used them, everybody had an equal chance.

1297. *armatum conscendere*, 'for a man with a sword to mount'; the inf. is used as a noun (and so *moderariet*, *vigere*, and *temptare* below), and is subject to *prius est*, 'is an earlier invention'.

1298. *vigere*, i.e. to use the sword, the left hand being taken up by holding the bridle.

1300. *bis binos*, sc. *equos*; so *bis bina quot sunt*, 'how much is twice two?'

1302. *boves Lucas*, 'Lucan kine', i.e. elephants, which the Romans called by this name, because the first elephants they saw were employed by King Pyrrhus in Lucania when he brought an army to conquer Italy, 281 B.C.

turrîto=*turrigero*; so *auritus*, 'furnished with ears'.

taetras, 'hideous'.

1303. *anguimanus* is acc. plur. fem., the compounds of *manus* being declined like *manus*; comp. Cic. De Nat. De. ii 122 *manus etiam data elephanto est*. An elephant's 'hand' sounds strange; but 'trunk' is really stranger, being a mere corruption of 'trump'; the French word is *trompe*.

Poeni, 'the Carthaginians'.

1305. *alid*=*aliud*; *aliud ex alio* would not scan; so Lucr. uses the archaic form. Catullus (66 28) has *alîs* for *alius*.

1306. *esset*: final subj., *quod* being = *ut id*.

1308—1349. *Some tried to use wild animals in war; but these attacked their own side just as much as the enemy, as even elephants some-*

times do. So only the desperate had recourse to such dangerous expedients.

1308. *munere belli*, 'the service of war'; *belli* is gen. of definition like *novitatis nomen* l. 909; comp. *ζηῦλα θανάτρου*.

1309. *sunt* belongs to *experti*; see n. to l. 90.

1310. *partim* = *nonnulli*; see n. to l. 840.

1312. *moderari* *his*: here *moderari* governs the dat., but, l. 1298, the acc.; both constructions are common.

possent: final subj.

1314. *nullo discrimine*, i.e. making no distinction between friend and foe.

1315. *crisidae* are not the lions' manes but some head-gear with which they were supplied to make them appear more formidable.

1316. *fremitu*, sc. *leonum*.

perterrita equorum pectora, 'the terror of the horses excited by...'

1317. *convertere*, sc. *equos*.

1319. *adversum*, *ἐναντίον*, is an adv.

venientibus ora petebant: though English prefers the gen., it is the idiom of Latin and many other languages to use a dat. of the person when parts of the body are in question; thus *caput ei abscisum est* is, in French, *on lui trancha la tête*.

1320. *et nec opinantes*, sc. *alios*; see n. to l. 777.

1321. *doplexae*, 'twining round them'; a very rare word.

1322. *morsibus*, 'savage jaws'; just so *osculum* is used of a mouth which kisses rather than bites, by Lucr. iv 1081, Mart. xi 91 7.

1324. *hauribant*: for the form see n. to l. 934, for the meaning n. to l. 991. *subter*: adv., as almost always in Lucr.

1328. For the repetition (*epanalepsis* is the technical name) see n. to l. 951.

1329. *dabant ruinas*: see n. to l. 347.

1330. *transversa exibant*, 'by swerving tried to avoid'.

adactus is a noun.

1332. *ab nervis succisa*, 'with their tendons severed', i.e. hamstrung, the regular sense of *succidere*. With *ab nervis* (= *a parte nervorum*) comp. *a terris* l. 754. *videres*, 'one might have seen'; see n. to *adportes*, l. 100.

1334. *domi domitos*: notice the *assonance* or play on words, a constant feature in old Latin poetry; see n. to l. 392.

1335. *in rebus agundis*, 'in the heat of action'.

1336. The ablatives are causal.

1337. *redducere*, 'to rally'.

1339. *boves Lucae*: see n. to l. 1302.

male mactae, 'cruelly mangled'; *mactae* is probably the particip. of an obsolete verb *macĕre*, and to be distinguished from the particip. of an obsolete *magĕre*, found in the phrase *macte virtute*, 'well done!'

1340. *fera facta*, 'cruel sufferings'.

1341—1346 are found in the MSS. but are omitted in this text. They make no sense here, nor would they anywhere else. They are clearly a collection of tags from other parts of the poem, interpolated here by some ignorant copyist.

1347. The sentence would be more symmetrical if it ran thus: *sed id faciēdo non tam vincere voluerunt quam dare* etc.

1348. *gemerent* is consec. subj., *quod* being = *tale quid ut*.

ipsique perire: the emphasis falls entirely on the first part of the verse; for they did not wish to die, but to make the enemy suffer even at the cost of their own lives. This method of expression is commoner in Greek, e.g. *ἐβούλοντο δράσαντές τι παθεῖν*; comp. Thuc. iii 40 *οἱ μὴ ξὺν προφάσει τινὰ κακῶς ποιοῦντες ἐπεξέρχονται καὶ διόλλυνται*, 'attack and are destroyed', i.e. attack at the cost of their own lives.

1349. *vacabant*, 'were without', governing the abl.; this word is extremely common, with the dat., in post-Augustan Latin, especially in two senses, 'to have time for', and 'to devote time to', i.e. to study; both occur together in Mart. xi 16 *nec musis vacat, aut suis vacaret*, 'he has no time for poetry; if he had, he would write poetry of his own'.

1350—1360. *There was no weaving before iron was discovered, iron being necessary to make the implements of weaving. At first weaving was done by men until the reproaches of the husbandmen forced them to leave it to women.*

1350. *nexilis vestis* would be a garment of skins tied on the body.

1352. *ratione alia*, i.e. without iron.

1353. *insilia*: the meaning is uncertain, and the epithet *levia* does not suit 'treadles' which is given in the lexx.; perhaps 'heddles', of which there were two in the ancient loom to separate the threads of the warp or vertical yarns.

fusi: the *fusus* is no part of the *tela* or loom, but was used along with the *colus* to make the yarn.

radii and *scapi* are both connected with the loom: the *radius* was used to press together the threads, the *scapus* to tie the threads of the warp to, at the bottom of the loom. It should be remembered that the ancient loom was vertical, the weaver standing at his work.

1356. *sollertius*, 'more ingenious'.

1357. *vitio*: predicative dat.

1358. *ut* is consecutive, not final.

1359. *pariter*, i.e. *cum agricolis*.

1360. *durarent*: for a different sense see l. 57.

1361—1378. *Nature herself taught men to sow the fields and to plant and graft young shoots. One kind of tillage after another was tried, and more land daily brought under cultivation.*

1361. *specimen*, 'model'.

1364. *pulli* is more commonly used of the young of animals; so in French, *poulet* is a chicken, *poulain* a colt; Lucr. uses *pullus* for both (ii 927, iii 764).

subter: see n. to l. 1324.

1365. *unde*=*et ab hoc*. *libitumst*, 'they got a desire'.

1366. *defodere*: see n. to l. 935.

1367. *dulcis agelli*, 'the plot they loved'; 'sweet' is seldom a useful epithet in English, except of things that can be smelt, tasted, or heard.

1368. *fructus* is governed by *mansuescere*.

1369. *indulgendo*, sc. *terrae*, 'by their treating the land well', διὰ τὸ εὐεργετεῖν: there is a change of subject; see nn. to *novando* l. 194, *procudendo* l. 1265.

1370. *succedere*: see n. to l. 1123.

1373. *haberent* is final subj.

1374. *caerula*, γλαυκῆ, 'grey-green'.

inter is separated from *currere* by tmesis; see n. to l. 287. *plāga*, 'a strip'.

1377. *omnia*, 'all the ground'. *intersita ornant*: see n. to l. 109. *ornant*, sc. *homines*.

1378. *arbustis*, 'plantations'; see n. to l. 671.

circum is an adverb.

1379—1435. *The earliest music was an attempt to whistle in imitation of birds. Then the sound of the wind blowing through reeds suggested to men to make the pipe which you may hear shepherds play on the hills. This music, together with dancing and rustic festivities, gave much pleasure when it was new, and served to solace such as could not sleep, though it would not give satisfaction now. The old simplicity of life soon passed away; skins and acorns and beds of leaves fell into contempt, though they had once been so prized. We now prize gold and purple instead, and poison the happiness of our lives by ambition and greed.*

1379. *imitarier* (= *imitari*) is used as a noun and is the subject to *fuit*; see l. 1297 for similar examples.

1381. *concelebrare*, 'to practise frequently'; l. 1167 *celebrare* = 'to throng', and so *concelebrare* is used, i 4. *aturesque iurare*, 'with pleasure to the ear'; the phrase may be compared with *ipsique perire*, l. 1348, as both express a *result* of the main action, though the result is stated as if co-ordinate, by what is called *parataxis*.

1382. *zephyri*: gen. sing. *cava calamorum*: see n. to *viai cuncta*

l. 739. *sibila*: *sibilus* makes this irregular plural; see n. to l. 1397.

1383. *agrestes* is a noun here.

1385. *canentum*, 'of the players'; *canere* is constantly used of playing as well as of singing.

1386. *reperta*, (fem. sing.), '~~met with~~', not 'invented'. *This is what Bailes uses from P.*

1387. *otia dia* = *otia sub divo*, 'peaceful places beneath the open sky'; so, i 22 *dias in luminis oras*, *dias* = *aetherias*; but, ii 172, *dia voluptas* = *divina voluptas*.

1388, 1389 are identical with ll. 1454, 1455, and are omitted in the text, having been inserted here in the MSS. by a blunder.

1390. *ollis*: see n. to l. 1291.

1391. *sunt cordi*, 'are dear'; *cordi* is locative, lit. 'at heart'; a very common phrase in all periods of Latin, usually with another, personal, dat.; Hor. Od. i 17 13 *dis pietas mea et musa cordi est*.

1392. *inter se*, 'in groups'.

1393. *propter*: see n. to l. 31.

1394. *non magnis*: comp. *non magno* l. 604.

iucunde habebant = *curabant*; see n. to l. 939.

1395. *tempestat*, 'the weather'; so l. 744. *ridebat*: for the indic. expressing frequency, see n. to l. 1257.

1397. *ioca*, plur. of *iocus*; so *loca* from *locus*, *sibila* from *sibilus*.

1400. *floribus* is abl. of instrument, after *plexis*, 'plaited with flowers'.

1401. *extra numerum*, 'out of step'; the opposite of *in numerum*.

1402. *duriter*, 'clumsily'; see n. to *uniter*, l. 537. *terram pede pellere*: comp. Hor. Od. iii 18 15 *gaudet invisam pepulisse fossor ter pede terram*.

1405. *hinc*=*ab hoc*, i.e. from music. *solacia somni*, 'consolations for the want of sleep'; so the watchman on the roof of Agamemnon's palace sang to himself as *ὑπνου ἀντιμολπον ἄκος* (Aesch. Agam. 16, 17).

1406. *ducere*, *flectere*, and *percurrere* are used as nouns in the nom. case, in apposition with *solacia*.

multimodis: see n. to *omnimodis*, l. 190.

1407. *supera*: preposition.

unco labro: comp. Browning's Pied Piper of Hamelin vii 'to blow the pipe his lips he wrinkled'.

1408. 'and even now watchmen keep the tradition they have received from them'; *unde*=*a quibus* and goes with *accepta*. *vigiles* may be the sentinels in a camp or the watchmen in a town; in imperial Rome there were 7000 *vigiles*, their chief duty being to extinguish fires.

1409. *recens* is the adverb. *hilo*: abl. of amount of difference; the acc. occurs l. 358.

1410. *interca*=*tamen*; see n. to l. 83. *dulcedini' fructum*, 'enjoyment of delight'; the phrase occurs before, ii 971.

1412. *praesto*: adverb.

1413. *in primis* is often written as one word.

1414. *illa* is acc. plur. neut.; *reperta* is nom. sing. fem., agreeing with *res*. *posterior* may be translated by an adverb.

1415. *sensus*, 'our feelings'. *ad*, 'in regard to'.

1416. *coepit*, sc. *esse*; comp. Juvenal iii 114 *et quando coepit Graecorum mentio*. *relicta sunt* is the verb; for the separation of the words, see n. to l. 90.

1417. *strata herbis* is an epithet of *cubilia*. *frondibus aucta*: comp. *ignibus aucta*, l. 723.

1418. *pellis*: gen. sing. *contempta*, 'into contempt'.

1419. *quam*=*quamvis eam*. *invidia...repertam*, 'was so envied formerly when discovered'; *invidia* is abl. of attendant circumstances.

1420. *gessit* (= ἐφάρησε), sc. *eam*.

1421. *et tamen*, 'and after all', i.e. though they had committed murder to get it; see n. to l. 1096. *sanguine* is causal abl. after *disperissee*.

1422. *convertere* = *converti*: see n. to *vertere*, l. 831.

1425. *quo*, 'and in this'. *magis* goes with *in nobis*, not with *quo*.

1428. *auro signisque* is a hendiadys, meaning 'figures embroidered in gold'. *apta* is the particip. of *ap̄ere*; see n. to l. 537.

1429. *dum*, 'provided that'. *plebeia*, sc. *vestis*. *tamen* is to be taken with *defendere*; for its position, see n. to l. 1088.

1432. *habendi finis*, 'the right limit of possession', i.e. to what point it is desirable to go on acquiring property.

1433. *omnino*, 'in general'; comp. *omnino*, l. 1177. *quoad*: see n. to l. 1033. *Lucr.* means that pleasure pursued beyond a certain point ceases to be pleasant.

1434. *in altum*, 'into the deep sea', *εἰς πέλαιος*; comp. the metaphorical use of *μετέωρος*.

1435. *aestus*, 'billows'.

1436—1439. *The motions of the sun and moon taught men to observe the seasons of the year.*

1436. *vigiles* is perhaps a noun as in l. 1408, 'watchful guardians'.

1437. *circum*: adverb.

1439. *ratione*, 'plan'; *rem*, 'the system'.

1440—1447. *At length men began to live in walled cities, to divide up the land, and to sail the sea. States made alliance with one another; letters were invented, and then history began to be written.*

1440. *iam* qualifies the whole sentence, not merely *validis*.

degebant aevum = *vivebant*; comp. *colere aevum*, l. 1150.

1441. *divisa colebatur*: see n. to l. 109.

1442. *velivolis*, 'sail-winged'; applied by Virgil to the sea, *Aen.* i 224; a good instance of the elaborate art with which Virgil refines on the simplicity of *Lucr.*

florebat: a bold metaphor, but less bold than a similar one in *Aesch. Agam.* 659 *δρῶμεν ἀνθῶν πέλαιος Αἰγαίου νεκροῖς*.

1444. *res gestas*, 'the deeds of heroes', *κλέα ἀνδρῶν*, such as Achilles sang in his tent to the lyre (*Il.* ix 189): the history of most nations begins with such records; see the Introduction to Macaulay's *Lays*.

1445. *elementa*, 'the letters of the alphabet'.
 1446. *prius*, i.e. before the invention of writing.
 1447. *ratio*, 'reasoning'. Comp. ll. 324—329.

1448—1457. *Thus by degrees practice and experience suggested to men all useful inventions and afterwards all the fine arts and luxuries of life. There has been a gradual but steady progress until perfection in them all has been reached.*

1449. *vias*, 'roads'; an important part and instrument of civilisation which the Romans thoroughly understood.

1450. *praemia*, sc. *vitae*; see n. to l. 1151. *funditus*, 'without exception', usually has *omnes* after it in Lucr.; but see ll. 497, 1435.

1451. *daedala signa polire*, 'the shaping of well-wrought statues'; *polire* is used as a noun in the acc. case. *daedala* is used in its passive signification; see n. to l. 234.

1452. *usus*, 'practice'; comp. Virg. Georg. i 133 *ut varias usus meditando extunderet artes*.

1453. *progredientes*, sc. *homines*, a second acc. after *docuit*.

1454. *unumquicquid*=*unumquidque*; see n. to l. 131.

1455. *in medium*, 'in sight of all men'; so l. 1160.

luminis oras: see n. to l. 85.

1456. *aliud*=*aliud*; see n. to l. 1305. *ex alio* and *ordine* are treated as co-ordinate adverbs, 'after another and in due order'.

1457. *artibus* is dat. *commodi*, but may be translated, 'in the arts'.
venere, sc. *artes*.

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